MAY, 1963 • 50¢

AMERICAN Cinematographer

International Journal of Motion Picture Photography and Production Techniques

Cameras Designed For

OFF-SHOULDER SHOOTING

★

'Pocket-size' Camera Dolly

ALSO IN THIS ISSUE

Photographing "The Balcony" • Some Aspects Of Shooting Films For TV

How The Producers Service House Aids Film Makers

W. J. GERMAN, *INC.*

AGENT FOR THE SALE AND DISTRIBUTION OF

EASTMAN *Professional Films*

IN THIS DAY of speed and deadlines the importance and real values of quality materials is increasingly vital to success. To engage in a competitive venture with less than the best that is available to you is giving your competitor an advantage to which he is not entitled. Insist that from camera to screen you have every advantage that quality raw stock can provide . . . specify Eastman Professional Motion Picture Films. For true economy and a maximum of satisfaction for you and your client rely on Eastman Films, supported by the most experienced service and research staffs in the industry today.

FORT LEE, New Jersey
LONGACRE 5-5978

HOLLYWOOD
6677 SANTA MONICA BLVD.
HOLLYWOOD 4-6131

CHICAGO
6040 N. PULASKI ROAD
IRVING 8-4064

ARRIFLEX at work — ONE OF A SERIES*

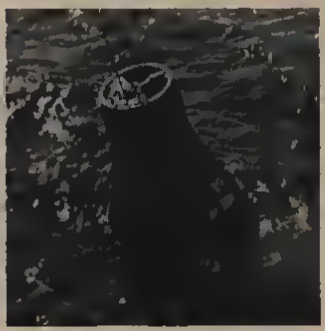
Col. John Glenn enters space capsule "Friendship 7" to prepare for epic flight

At Cape Canaveral as across the world, Arriflex records operations of Glenn's launch crew

Capsule activity on world map in Mercury Control filmed by Arriflex on crane

Arriflex assigned to tracking station at Kano, Nigeria takes background footage

Arriflex readied to photograph Glenn's arrival aboard Aircraft Carrier **Randolph**



Home safe! "Friendship 7" is recovered from Atlantic and hoisted aboard

ARRIFLEX® records history in filming "FRIENDSHIP 7's" orbital flight

Arriflex is proud to have contributed to the official recording of Col. John Glenn's epic spaceflight in **Friendship 7.** Strategic placement of 12 Arriflex 16mm cameras, with a battery of lenses, helped co-ordinate tracking and filming of the event in Cape Canaveral, Bermuda, Nigeria, Australia, Hawaii, Mexico, California, Texas and aboard the Aircraft Carrier **Randolph** in the Atlantic. "From Missiles to Microbes" Arriflex 16mm and 35mm motion picture cameras are sharing in today's most sophisticated ventures into the frontiers of science and industry. In research and development, in the studio or on location Arriflex motion picture cameras do the job better, faster and more economically.

(BASED ON DATA AND PHOTOS SUPPLIED BY GENERAL DYNAMICS/ASTRONAUTICS)

From the microscope to the missile range... from spot locations to sound stages... Arriflex professional motion picture cameras are the dominant choice of filmmakers in science, industry, and entertainment. They're lightweight, rugged, tremendously versatile — uniquely suited to a range of applications virtually without limits. Here are some of the features that give Arriflex cameras their remarkable capabilities:

• MIRROR-SHUTTER REFLEX VIEWFINDER • REGISTRATION-PIN FILM MOVEMENT • 21°-DIVERGENCE 3-LENS TURRET • CONTOUR HAND GRIP • FRAMES-PER-SECOND TACHOMETER • COMPLETE ACCESSORY SYSTEM... lenses, standard and special-purpose electric drives, power supplies, time-lapse equipment, film magazines, sound blimps, tripods.

WRITE FOR NEW CATALOG.

***YOU ARE INVITED** to send us a description of **your** special use of Arriflex equipment

ARRIFLEX CORPORATION OF AMERICA | **257 PARK AVENUE SOUTH, NEW YORK 10, N. Y.**

acclaimed!

MOST SENSITIVE
WIDEST RANGE
EXPOSURE METER
EVER MADE!

GOSSEN®
Lunasix
ELECTRONIC

Introduced a short time ago, the Gossen LUNASIX Electronic has been acclaimed around the world! No other exposure meter so effectively measures the extremes of light—from brilliant sun to the threshold of complete darkness. with consistent accuracy. Try the Gossen LUNASIX Electronic yourself—for an adventure into new photographic horizons!

HERE'S WHY THE LUNASIX HAS WON PRAISES FROM STILL AND MOVIE PHOTOGRAPHERS EVERYWHERE!
Measures reflected and incident light with built in hemispheric diffuser ● 30° light acceptance angle ● Two-better brightness range system ● Automatic needle lock ● Built-in battery tester ● External zero adjustment ● Smooth one-hand operation ● Computer range: ASA 6/1° to 12,000/12°, t/1 to 1/60, 1/4,000th sec to 8 hours, Cine 8 to 128 frames per sec, EV—2 to EV+22, .014 to 14,000 foot-candles ● Weight 7 ounces

Another famous GOSSEN meter

GOSSEN®
Sixticolor
color temperature meter
and filter indicator

INSTANTLY Shows color temperature of light source (in degrees Kelvin) and filter required for correct color balance . . . with ANY type of color film Calibrated in "decamired" filter scale adopted by leading camera and filter manufacturers Complete with leather ever-ready case and gold-metal chain

See the entire Gossen line at franchised photo dealers

KLING PHOTO CORPORATION
257 PARK AVENUE SOUTH NEW YORK 10 N Y

AMERICAN
Cinematographer

INTERNATIONAL JOURNAL OF MOTION PICTURE PHOTOGRAPHY AND PRODUCTION TECHNIQUES

MAY, 1963 Vol 44, No 5

FEATURES

"The Balcony"—Cinematic Illusion Without Confusion 274
The Producers Service House—Aid to Film Makers 276
Some Aspects of Photographing Films For Television 278
Designed For Shootin' From The Shoulder 284
'Pocket-Size' Camera Dolly 286
Shooting "International Showtime" In 16mm Color 288
A Matte Box For Producing Effects In 16mm 290

DEPARTMENTS

Industry News 256
Hollywood Bulletin Board—Mohr Elected ASC Prexy 262
Behind The Cameras 264
Technical Questions & Answers 268
What's New In Equipment, Accessories, Services 270

ON THE COVER

LINING UP A TRICKY low-angle moving camera shot of Danny Kaye for Columbia Pictures The Man From The Diners Club Directing the photography is Hal Mohr, ASC, standing in back of camera and playing beam of fill light on Kaye from Sun Gun mounted on car hood The Mitchell camera is mounted low to take in both Kaye and background as car moves down street Crouching behind camera is Director Frank Tashlin —Photo by Van Pelt

ARTHUR E. GAVIN, Editor

MARION HUTCHINS, Editorial Assistant

OFFICES—Editorial and Business 1782 No Orange Drive, Hollywood 28, Calif. Telephone HOllywood 7-2135. EASTERN ADVERTISING REPRESENTATIVE: Paul Gilbert, 489 Fifth Avenue, New York 17, N Y. Telephone AX 7-5641

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S C Holding Corp, 1782 N Orange Dr Hollywood 28 Calif SUBSCRIPTIONS United States and Canada $5 00 per year Foreign, including Pan-American Union $6 00 per year (Remit by International Money Order or other exchange payable in the U S) Single copies 50 cents, back numbers 60 cents foreign single copies, 60 cents back numbers 70 cents Advertising rates on application

Copyright 1963 by A S C Holding Corp
Second class postage paid at Los Angeles California

IN THE EAST...IT'S MOVIELAB

FOR COLOR AND BLACK & WHITE

DEVELOPING COLOR NEGATIVES • ADDITIVE COLOR PRINTING • REDUCTION PRINTING INCLUDING A & B • COLOR SLIDE FILM PROCESSING • BLOWUPS • INTERNEGATIVES • KODACHROME SCENE-TO-SCENE COLOR BALANCED PRINTING • EKTACHROME DEVELOPING AND PRINTING • REGISTRATION PRINTING • PLUS COMPLETE BLACK AND WHITE FACILITIES INCLUDING CUTTING ROOMS, FILM AND TAPE VAULTS AND THE FINEST SCREENING FACILITIES IN THE EAST

MOVIELAB

MOVIELAB BUILDING, 619 WEST 54TH ST.
NEW YORK 19, NEW YORK • JUdson 6 0360

Camera Mart

LOWEL-LIGHT LOCATION KIT

Everything in one compact case 4½"x27½"x 6½" six Lowel Lights six Lowel barndoors 2 6-ft 5 section PIC stands 3 25-ft extension cables, 2 25 amp fuses 12 yd roll gaffer tape

Complete – $124.50

Lowel-Lights model K5, five Lowel-Light with gaffer tape and case – $ 34.50

Gaffer tape 12 yard roll $ 1.95

Gaffer tape 30-yard roll $ 3.95

Lowel Barndoors $ 5.75

3 NEW CAMERA MART ACCESSORIES

NEW GTC-59 LENS CLEANER & PROTECTOR

• Anti-Fog • Anti-Static

Ideal for lenses, cameras, condensors, reflectors, optical equipment, etc

6 oz can with Spray Applicator $1.65 each
Case of 12/$1 00 each

Liqui-tape LIQUID INSULATING TAPE

Just Brush it on Those Hard-To-Tape Places

Designed for use in electrical installations, maintenance and repair. Prevents shorts, shocks.

2 oz. Bottle $1.65 each Case of 12/$1 80 each

contact Restores, Quiets, Lubricates

Completely safe for sound projectors, amplifiers, studio recording equipment and editing equipment. Non-inflammable. Used for all gummy parts — Instantly cleans and deposits a hard bonded dry lubricant.

2 oz. Bottle $1 00 each Case of 12/75c each

Write for complete literature All Prices F O B N Y

the CAMERA MART inc.
1845 BROADWAY (at 60th St.)
NEW YORK 23 N Y • PLaza 7-6977 •

INDUSTRY NEWS

News briefs of industry activities, products and progress

Cinerama Has Competitor in British D-150 System

A new ultra-widescreen process, Dimension 150, said to be comparable to the dimensions of the original Cinerama is scheduled to be unveiled for the public sometime in 1964 Initial presentation will be a feature to be made in England by John Halas and Lothar Wolfe under the supervision of Louis de Rochemont

Dimension 150 is first new process to offer competition to Cinerama since the short-lived Cinemiracle process faded from scene a few years ago It uses a single, specially-printed 70mm film for exhibition and in this respect further competes with the new Cinerama process which employs new single-film projection print and will debut in Hollywood in November with the presentation of Stanley Kramer's "Mad, Mad, Mad, Mad World" It is not known if the D 150 process is compatible, projection-wise, with Cinerama.

With D-150, picture is photographed on regular 70mm negative, same as new Cinerama Process, with the camera fitted with special lenses having an arc of view range of 50 degrees to 150 degrees Widest arc achieved with the original 3 panel Cinerama cameras was 146 degrees.

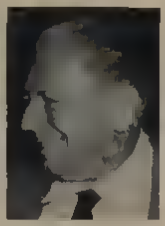
Advantage of using single 70mm negative in both the Cinerama and D-150 processes is the resultant elimination of lines of demarcation between the three picture panels on the screen, also ability to print down releases to conventional 35mm, where desired

•

William Mellor, Veteran Cinematographer, Dies

William C Mellor, ASC, who last month was compelled because of illness to withdraw as director of photography on "The Greatest Story Ever Told," George Stevens production died April 30 while hospitalized following recent surgery

A two time Acadamey Award winner for photographic achievement ("A Place In The Sun," 1951 and "Diary Of Anne Frank," 1959) Mellor was for many years under contract to 20th Century Fox studios He was acknowledged one of Hollywood's most skillful and versatile masters of the camera.



William C Mellor

At Paramount Studios, where he began his career in the late twenties as a helper in the film laboratory, Mellor advanced rapidly to a full-fledged director of photography and proved his versatility shooting everything from westerns to comedies, to Bing Crosby & Bob Hope musicals He probably photographed more productions starring Paramount's then pet glamour-girl, Dorothy Lamour, than any other cameraman.

He had been a member of the American Society of Cinematographers since 1933 and was a member of an exclusive group in that organization who had received Gold 25-year Membership cards His sister Mrs. Dorothy M. Bunker of Los Angeles survives.

•

New ASC Members

Recently elected to membership in the American Society of Cinematographers were Walter Beyer, Associate, and Robert Hauser, Active Beyer heads the ASC's Research and Educational Committee as Chairman Hauser has directed the photography of such TV film series as "Combat," "Desilu Playhouse," "Bus Stop," and "Yancy Derringer."

•

Joseph A Tanney, Founder of S.O.S., Honored

A testimonial luncheon honoring Joe Tanney, founder of S O.S Photo-Cine-Optics, Inc, New York, was given the industry leader April 23 in Atlantic City, N J., during gathering of S.M P T E conventioneers there Host was Alan C Macauley, who succeeds Tanney as President of the company

Tanney, one-time newspaper reporter, manager of an automotive supply house, and technician with the old Metropolitan Studio in Ft Lee, launched the business that ultimately was to become known as "S O.S ", in 1926

Continued on Page 258

THE SECOND MOST IMPORTANT TIME IN THE LIFE OF RENTAL EQUIPMENT

CAMERA EQUIPMENT CO., INC

We all know the most important time — when the word is "Action!" and your motion picture equipment **must** perform flawlessly. There's a "Second most important time." And that, strangely enough, is when **nobody** is using the equipment

This is the time — **every time** — between users, that every variety of CECO rental equipment is subjected to prescribed, rigorous inspection, of a unique kind that only the world's largest repair/service department is equipped to provide . . .

In Depth Service that means equipment you can rely on wherever in the world your filming takes you. One of the reasons more professionals rent from CECO than all other sources combined **Rent with confidence . . . Rent from CECO.**

Select from the largest variety of equipment available anywhere in the world . . . at the lowest possible cost

- **CAMERAS**
  16mm & 35mm — Sound (Single or Double System) — Silent — Hi Speed — Instrumentation
- **LIGHTING:**
  Arcs — Incandescents — Spots — Floods — Dimmers — Reflectors
  All Lighting Accessories
- **GENERATORS**
  Portable — Truck Mounted
- **SOUND EQUIPMENT:**
  Magnetic — Optical — Mikes — Booms
- **GRIP EQUIPMENT**
  Parallels — Goboes — Other Grip Accessories
- **CRANES, DOLLIES**
  Chapman — Crab — Portable
- **LENSES.**
  Wide angle — Zoom — Telephoto — Anamorphic
- **EDITING EQUIPMENT:**
  Moviolas — Viewers — Splicers — Rewinders
- **PROJECTION EQUIPMENT**
  16mm & 35mm — Sound & Silent — Slide — Continuous
- **TELEVISION**
  Closed Circuit TV
- **CAMERA CARS**

WHERE THE PROS GO . . .

CAMERA EQUIPMENT CO., INC.

FIRST IN SALES, SERVICE, RENTALS AND REPAIRS

A SUBSIDIARY OF CECO INDUSTRIES INC

NEW YORK N Y
315 West 43rd St • JU 6-1420

HIALEAH FLORIDA
51 East 10th Ave • TU 8-4604

HOLLYWOOD CALIFORNIA
6510 Santa Monica Blvd • HO 9-8321

CAMERA EQUIPMENT CO., INC
315 W 43rd Street, New York 36, N Y

Gentlemen Please rush me your FREE complete catalogue of Rental Equipment

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____

Camera Mart

CAMART DUAL SOUND EDITOR MODEL SB111

Edit single and double system 16mm or 35mm optical sound Edit single system magnetic or double system magnetic sound Use with any 16mm motion picture viewer to obtain perfect lip-sync matching of picture to track Works from left to right or right to left

Dual Editor (without viewer) Optical model $195.00

Zeiss Moviscop Viewer 96.0

Special Editor-Viewer Comb 269.50

CAMART CORE DISPENSER

Keeps film cores handy at all times. Attaches easily to work table or wall. Easy to remove, easy to fill All aluminum construction

Sizes:

Length 16" $10.00

Length 24" 12.00

Length 36" 16.00

Aluminum Dispenser for Plastic Reels

50' 16.50

100' 18 50

FOR MOVIOLAS CAMART TV MATTES

- View the correct TV frame size
- Eliminates guess work
- Precision cut . fitted from durable heavy gauge plastic

Moviola New Type Large Conversion 4 x 5 Picture Head for 16mm and 35mm

Moviola New Standard 'tilt-type' 3 x 4 Picture Head for 16mm and 35mm

Moviola 16mm Picture Head, 2¾x3½

ALL SIZES $5.95

the CAMERA MART inc.
1845 BROADWAY
NEW YORK 23, N. Y.
Cable: Camermart

INDUSTRY NEWS

Continued from Page 256

In the mid-thirties, a merger with International Theatre Accessories Corp saw the business well on its way to success and by the end of World War II it had become important as a major supplier of motion picture production equipment

In the mid-fifties, progress of the company under Tanney's guidance led to company opening a western office in Hollywood with Alan Macauley as manager Eight years later, an expansion move culminated in changing the company name to S.O S Photo-Cine Optics, Inc, Tanney's retirement as president, and Macauley's elevation to head of the company

•

ITALIAN FILM technicians see demonstration of ColorTran lighting equipment in Rome

Mole-Richardson Sponsors Italian Industry Meeting

The opening technical meeting for the 1963 season for the A.T I.C. (Associazione Technica Italiana Cinematografica) was held in Rome last month, sponsored by the Mole-Richardson (Italia) organization

The meeting was attended by more than 180 members of the motion picture and television industries of Italy Highlight of the meeting was an address by Mr Gordon Cook, of Rank-Taylor-Hobson, London, who spoke on "Recent Advances in Cine Optics."

Following the meeting, various types of film production equipment represented by Mole Richardson were demonstrated In the photo above Mr Ing. Cok, on the right, of Mole-Richardson, is shown demonstrating the new Color Tran Quartz-King "Dual" light to cameramen and technican members of the A T I C

•

General Film Labs Marks Tenth Anniversary

The president of General Film Laboratories, William E. Gephart, Jr., commemorated his firm's 10th birthday last month with the shortest speech on record for such an occasion "We are surprised to be so big so soon," he said, simply.

A division of Pacific Industries, Inc since 1956, General is one of the major Hollywood processors of professional motion picture film, with a yearly total of approximately 140 million feet of color and black-and-white film, including theatrical feature films, television programs and commercials, and industrial, educational, and government films

During its ten-year span, the company reports, it has introduced to the industry the first automated control of printing processes, and the first computerized production-control system. Other novelties include development of high-speed processing for "hot" kines, which was the backbone of the company's business in its early years, and the pioneering and perfecting of the 35/32 method of producing 16mm negatives and prints

•

Production Brass View Effects For "Mad-World"

Arthur Krim, President, and a contingent of other United Artists top brass, held final production conferences at Film Effects of Hollywood, where photographic special effects for Stanley Kramer's "Mad, Mad, Mad, Mad World" are being completed. Linwood G Dunn, ASC, President of Film Effects, demonstrated how miniatures, mattes, optical effects and animation are being used in the Kramer block buster. Seen in above photo, taken in front of the Film Effects of Hollywood Studio are: (l-r) Earl Kramer, Al Horwitz, Dunn, Stanley Kramer, George Schaeffer, Meyer Beck, Robert S. Benjamin (Chairman of the Board, United Artists), Krim, Arnold Picker (Executive Vice President, United Artists), James R Velde (Vice President in Charge of Sales, United Artists), Robert T. Blumofe (Vice President, United Artists West Coast office), David Picker (United Artists Vice President), and Eric Pleskow, (Vice President in Charge of Foreign Distribution)

Continued on Page 310

25MM
250MM

TEN-TO-ONE

ZOOM

This new Angenieux zoom lens is exclusive with sunshade, proxar lenses and filters at CSC.

Aperture: f 3 2 / maximum focus range: one foot to infinity / fixed image plane at all focal lengths / zoom range: 25mm to 250mm without image-shift / weight. 5 pounds, 2 ounces / immediate availability.

Lens can be mounted on all 35mm and 16mm cameras. Write for information on lens supports, correlators and motorized zoom and focus units.

camera service center, inc.

sales affiliate • CAMERA SALES CENTER CORPORATION

333 WEST 52nd STREET • NEW YORK 19, N.Y. • PL 7-0906

Look what's happened to the SUN

Photolight Head—7" deep (front to back including bracket) 6½" wide 5" high Weight 3½ pounds

Now it's all head...no handle...easier to mount with a new universal post clamp.

THIS IS THE NEW SUN GUN PHOTO LIGHT that professional photographers have been asking for. It's a complete, portable, studio lighting system...exceptionally versatile ...and lower in cost than you would ever imagine.

Now the redesigned SUN GUN Photo Light has a special bracket on the back of the head for easy mounting on poles or light stands anywhere Full mounting flexibility allows universal positioning. This unit has unusually powerful light output for a 1000-watt lamp.

The new SUN GUN Photo Light is also equipped with dual leaf rotating and locking barn doors, that turn a full 360°. It's lightweight, too. Weighs only 3½ pounds. And that's not all. There is a wide range of standard and optional accessories that gives the SUN GUN Photo Light virtually the flexibility of a complete lighting system. Lets you spread, spot, diffuse, etc. *The standard dual-purpose flood lens, for instance, affords you a range of beam spreads up to 110°.*

THE NEW SYLVAC CONTROL tells you exact voltage across the lamp, and allows you to dial the precise color temperature you require. For black and white work, this same unit gives you quick, easy, finger-tip control of light intensity and lighting ratios. And the SYLVAC Control also lets you control the SUN GUN Photo Light from any position in the shooting area, with suitable extension cord.

A product of Sylvania research in solid-state electronics, the SYLVAC unit is compact, lightweight and rug-

GUN Professional Photo Light!

SYLVAC Control—7" long 6¾" wide, 3½" high. Weight 4 pounds.

Now it comes complete with a new transistorized SYLVAC(TM) Control that lets you dial exact color temperature.

gedly built to stand hard use SYLVAC comes in two models: the SV-9 for one photo light; the SV-20 for two photo lights.

This new combination of SUN GUN Photo Light, SYLVAC Control and accessories gives you an integrated lighting system that is so compact, so lightweight ...you can easily carry it around in a suitcase.

SYLVANIA

SUBSIDIARY OF

GENERAL TELEPHONE & ELECTRONICS

Find out more about this remarkably portable, remarkably powerful studio lighting system. Mail coupon today for complete technical details or a free demonstration.

Sylvania SUN GUN® Products
Sylvania Electric Products Inc
730 Third Avenue, New York 17, N. Y.

☐ Please send me free technical information on the new SUN GUN Photo Light and SYLVAC Control Unit.

☐ I would like a free demonstration

Name_____

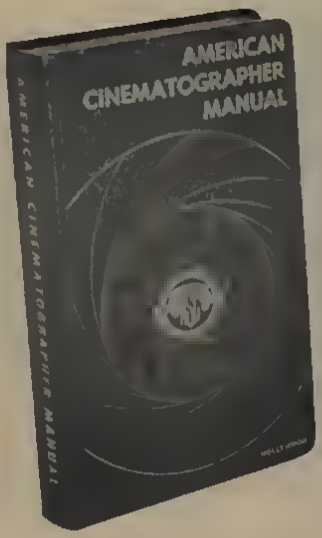
Address_____

City_____ Zone____ State_____

MOST RELIABLE GUIDE!

. if you shoot motion pictures for

TV or Theatres
Industry
Education
Government
Research, Etc.



There's something to help you on every page of this fact-packed book!

Never before a helpful book like this! Gives detailed answers to hundreds of problems and questions related to theatrical, TV, industrial military educational and documentary film production

Informational text covers data never before published on panning speeds, optical effects ultra light speed photography underwater cinematography background plates process shots travelling matte day for night photography color temperature, etc

Charts, tables and diagrams give instant answers to problems relating to lens angles, filter factors shutter openings camera speeds exposure, lighting especial relies etc Order your copy today!

$7.50
Post Paid

AMERICAN CINEMATOGRAPHER MANUAL
P O Box 2230 Hollywood 28 Calif

Please send me copies of the American CINEMATOGRAPHER MANUAL

Payment enclosed Ship C O D

Name

Street & No

City Zone

State

*For orders mailed within California please add 4% sales tax

HOLLYWOOD BULLETIN BOARD

ASC ELECTS HAL MOHR PRESIDENT

Called A Second Time To Head Cinematographers' Society

ASC PRESIDENT-ELECT Hal Mohr (seated center) surrounded by newly elected officers of the Society Top row from left are Robert de Grasse 3rd Vice-president, Charles G Clarke, Secretary, Arthur Miller Treasurer and Joseph Biroc Sergeant At-Arms Seated at Mohr's right is Burnett Guffey, 1st Vice-president and on his left, George Folsey, 2nd Vice president

HAL MOHR, a former President of the American Society of Cinematographers, last month was named to again head the cameramen's society following annual election of the Society's Board of Directors Mohr, one of Hollywood's veteran top flight directors of photography previously served as President of the ASC in 1930 and 1931

Mohr, who joined the Society in 1927, has served almost continuously since on its Board of Directors and often as a Vice president

Mohr has won two Academy Awards for photographic achievement, "Midsummer Night's Dream," (1935) and "Phantom Of The Opera" (1943), and an Academy Award Nomination for "The Four Poster" (1952) His most recent feature assignment was photographing "The Man From The Diners' Club" for Columbia Pictures, which stars Danny Kaye (See cover photo) Between feature film assignments, Mohr has photographed various TV films and TV commercials

Over the years, Hal Mohr has contributed considerably toward strengthening the prestige and dignity of the film industry's directors of photography. A pioneer member of the Academy of Motion Picture Arts and Sciences, which he joined the same year it was founded in 1927 he has served on the Academy's Board of Directors and as a representative of the Academy's Cinematographers' Branch for almost 18 of the 36 years he has been a member Mohr is presently Assistant Secretary of the Academy He is also a member of the Academy of Television Arts and Sciences which recently named him to a special committee to evaluate foreign-made TV films submitted as possible nominees for that Academy's forthcoming annual Emmy awards presentations

Among congratulatory messages received by Mohr the evening of April 29th, when he and fellow Board members were inducted into office, were telegrams from outgoing President Bill Daniels, who is in Stockholm, Sweden, Karl Freund, ASC, presently in Washington, D.C., and Eddie Blackburn formerly head of W J German, Inc in Hollywood, and an Honorary member of the ASC

Other officers elected with Hal Mohr were Burnett Guffey, 1st Vice president, George Folsey, 2nd Vice president, Robert de Grasse, 3rd Vice-president; Arthur Miller, Treasurer; Charles Clarke, Secretary; and Joseph Biroc, Sergeant-At-Arms ■

Question: Who In the World Rents from Birns & Sawyer?

Example: Producer Sam Spiegel, and Director David Lean, for Academy Award Winning **LAWRENCE OF ARABIA.**

Director David Lean in white hat, pointing, is directing Academy Award winning Lawrence of Arabia in hot sands of Jordan Dasart. Birns & Sawyer equipped the 16-month production with the Academy Motion Picture Research Council Crane and Worrall geared head shown in photo, which aided in a small way achieving the award for excellence in cinematography.

Making an Academy Award Winning Picture

Nominated for 10 Academy Awards, including Best Cinematography in color, *Lawrence of Arabia* achieved spectacular chase scenes by building a half-mile long "private railroad". A Birns & Sawyer "Academy" Crane with geared head, mounted on a flatcar, not only kept pace with galloping riders but enabled the special 70mm Panavision Technicolor camera to make steady, jerk free panning while swinging out for close-ups and down for low level shots.

To insure reliability, equipment was chosen in Hollywood and shipped to Jordan, rather than being picked from overseas sources. Birns & Sawyer is honored to have played a small part in the success of the picture. Let Birns & Sawyer dependable equipment and budget prices help your award-winning films.

To shoot long desert chase scenes the Academy Crane was mounted on a flatcar which ran on a half-mile track. Brilliant cinematography was by Fred A. Young, BSC.

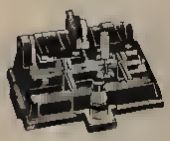
BIRNS & SAWYER Cine Equipment

6424 SANTA MONICA BLVD. • HOLLYWOOD 38, CALIF. • HO 4-5166 • CABLE: BIRNSAW

Birns & Sawyer Northwest • 611 East Pine St. • Seattle 22, Wash. • EA 4-4550

Value

from HOLLYCAM



BELL & HOWELL 16-35 HOT SPLICERS

Features

- Low visibility splices of frame line
- Built in scraper blade and holder
- Precision full fitting registration pins
- Heated blades with thermostatic control for perfect welds
- Hardened ground chrome steel cutter blades
- Portable but for heavy duty professional use
- 110V AC
- Model 19BA (Trade #135)

List price $339.00

NOW ONLY $259.00

MAGAZINES

BRAND NEW

16mm x 400' for B&H	$129.50
16mm x 400' for Mitchell	$112.50
35mm x 400' Mitchell	$125.00
35mm x 1000' Bell & Howell	$ 95.00

USED — EXCELLENT

16mm x 100' Cine Special	$125.00
16mm x 200' Cine Special	$350.00
16mm x 400' Cine Special Pair	$500.00
35mm x 400' B&H BiPack	$195.00
35mm x 400' Mitchell BiPack	$250.00
35mm x 400' Arri (Conv.)	$119.00
35mm x 2000' Mitchell	$265.00

6838 Sunset Boulevard
Hollywood 28, Calif
Phone HO 6-1318

HOLLYWOOD CAMERA CO.

BEHIND THE CAMERAS

WHAT THE INDUSTRY'S CAMERAMEN WERE SHOOTING LAST MONTH

BY MARION DERGHINS

NOTE: Asterisks following titles indicate television film productions.

AMERICAN-INTERNATIONAL

MARIO BAVA "Black Sabbath" (Galatea Prods., API, Eastman color) with Boris Karloff and Mark Damon. Mario Bava, director

MANUEL BERENGUER, ASC, "Pyro" (SWP Prod., Pancolor; shooting in Spain) with Barry Sullivan and Martha Hyer. Sidney W. Pink, director

FLOYD CROSBY, ASC, "The Haunted Palace" (Color) with Vincent Price and Debra Paget. Roger Corman, producer-director

RILTMORE STUDIOS, N.Y.

JACK PRIESTLY, "Naked City"*

RIOGRAPH STUDIOS—New York

GEORGE STOETZEL, ASC, "Car 54 Where are You?"*

CASCADE STUDIOS

HENRY FREULICH, ASC, Commercials*

ELWOOD BREDELL, ASC, Commercials*

TYLER BYARS, Commercials*

WINTON HOCH, ASC, Commercials*.

CBS—N.Y.

CHARLES MACK, LEO ROSSI, ROBERT CLEMENTS, "CBS Reports"*

FRED HOFFMAN, MIKE ZINGALE, "Candid Camera"*

COLUMBIA STUDIOS

GIL TAYLOR, "Doctor Strangelove Or How I Learned to Stop Worrying and Love the Bomb" (Trooper Films, shooting in Europe) with Peter Sellers and George C. Scott. Stanley Kubrick, producer-director

LEON SHAMROY, ASC, ROSS LOWELL "The Cardinal" (Gamma Prod., Tcolor with Tom Tryon and Romy Schneider. Otto Preminger, producer-director

ROBERT BRONNER, ASC, "Gidget Goes to Rome" (Jerry Bresler Prod., Eastman color shooting in Rome) with James Darren and Cindy Carol. Paul Wendkos, director

JOSEPH BIROC, ASC, "Under the Yum Yum Tree" (Brisson-Swift Prods., Eastman color) with Jack Lemmon and Carol Lynley. David Swift, director

CHRISTOPHER CHALLIS, "The Long Ships" (Warwick Films Prods., Technirama Technicolor, shooting in Yugoslavia) with Richard Widmark and Sidney Poitier. Jack Cardiff, director

GERALD HIRSCHFIELD, ASC, "Fail Safe" (Youngstein-Lumet Prod.) with Henry Fonda and Dan O'Herlihy. Sidney Lumet producer-director

GERT ANDERSEN, ASC, Donna Reed Show"*

ROBERT BRONNER, ASC, Commercials*

MALRY GERISMAN, ASC, Commercials*

EUGENE SHUFTAN "Lilith" (Centaur Prods. locations in N.Y. & Md.) Robert Rossen director

FRED GATELY, ASC, "Hazel"*

CHARLES WELBORN "Empire"*.

JACK MARTA, "Route 66"*.

ROBERT WYCOFF "Dennis the Menace"*, Commercial*

BURNETT GUFFEY, ASC, Commercials"*.

RICHARD RAWLINGS "Higgins". Commercials*

JERRY FAIRBANKS STUDIO

HAL MOHR, ASC, Commercials*

FILMWAY STUDIOS—New York

MORRIS HARTZBAND, ASC, "The Defenders"*.

GENERAL SERVICE STUDIOS

LESTER SHORR, ASC, "The Beverly Hillbillies"*.

ROBERT MORENO "Adventures of Ozzie & Harriet"*

HAL MOHR, ASC, Commercials*

DESILU—Gower

RAY FOSTER, ASC, Commercials*

Continued on Page 305

PROGRESS · LOYALTY · ASC · ARTISTRY

AMERICAN SOCIETY OF CINEMATOGRAPHERS

Founded January 8, 1919, The American Society of Cinematographers is comprised of the leading directors of photography in Hollywood motion picture and TV film studios. Its membership also includes cinematographers in foreign lands. Membership is by invitation only

•

OFFICERS

Hal Mohr, President
Burnett Guffey, 1st Vice-President
George Folsey, 2nd Vice-President
Robert de Grasse, 3rd Vice-President
Arthur Miller, Treasurer
Charles Clarke, Secretary
Joseph Biroc, Sergeant-at-Arms

BOARD OF GOVERNORS

Lee Garmes, Milton Krasner, Ernest Laszlo, Harold Lipstein, Ray Rennahan, Joseph Ruttenberg, Harry Stradling, Walter Strenge

ALTERNATE BOARD MEMBERS

Gordon Avil, George Clemens, Edward Colman, Linwood Dunn, Winton Hoch, Robert Pittack, Harold Rosson, John Seitz, Philip Tannura, James Van Trees.

sound-sound color-correct

all services all services

color printing sound-sound

byron motion pictures

all-services

Sound . . . Editing . . . Developing . . . Printing. Everything.

Once the cameraman shoots his footage, his job is done. The film is sent to Byron, and we take care of the rest—all of the necessary services you require. Color and spray black and white developing—negative, positive and reversal. Work prints. Edge numbering. Magnetic striping. Editing. Sound recording on our Westrex sound system, the finest, most flexible facility. Music. Screening. Interlock. Conforming. Answer prints. Release prints. Black and white and color. Every type of printing—additive and subtractive, contact, reduction and optical. Fades and dissolves. All color printing by our exclusive "Color-Correct" process. Quality control, with our technicians maintaining constant surveillance for contrast, exposure, gamma, color, and definition. We can provide everything except the original photography. And remember this: no order is too large for us, no order too small.

We do it all in one place, all under one roof, all in our own building, all at Byron Motion Pictures. We coordinate all services under a tightly controlled system of responsibility. We have the most modern equipment—in all departments. And, of course, we have the most experienced, skilled personnel. Come and see for yourself!

For free brochure on all Byron services, write, phone, or wire:

byron motion pictures

1226 Wisconsin Avenue, N.W., Washington 7, D.C., Area Code 202, FEderal 3-4000

Going to Europe

RELIABILITY
EXPERIENCE

WITH

MOLE-RICHARDSON
European Service

LIGHTING

MOLE - RICHARDSON
COLORTRAN INDUSTRIES
(exclusive European manufacturing and sales representatives)

CAMERAS
GRIP EQUIPMENT
DOLLIES AND CRANES
GENERATORS
SOUND EQUIPMENT

TECHNICAL CONSULTANCY AND SPECIALISED SERVICES

WRITE DIRECT:

FRANCE – 28-28 bis Rue Marcelin-Berthelot, Montrouge - Seine
Cables: Molereng - Paris
General Manager: René Schell

ITALY – Via del Velodromo 68-74, Roma
Cables: Molereng - Roma
General Manager: George Gordeer

GERMANY – Hofangerstrasse 78, München, 8
Cables: Molereng - München
General Manageress: Gisell Schneeberger

SPAIN – Alcalá 32, Madrid, 14
Cables: Molereng - Madrid
General Manager: Gregorio Sacristan

ENGLAND – Chase Road, London, N.W. 10
Cables: Molereng - London
Managing Director: John Page

ELGEET
ZOOM
NAVITAR

Elgeet offers Vidicon television cameras and 16mm cameras the first Zoom Navitar, a manually controlled 4:1 zoom with a 20mm to 80mm range—f 1.8! This new lens achievement is optically compensated to hold focus through the entire zoom action. Fourteen elements—covers Vidicon format—resolves 600 lines—linear zoom action by ring—list price $400. For information, write for Catalog 2080 CZ18.

Elgeet OPTICAL COMPANY, INC
303 Child St., Rochester 11, N. Y

Q & A

Technical Questions and Answers

Q.—*Having just purchased a second hand Bell & Howell 16mm Magnetic optical sound projector, I would like your opinion as to the feasibility of utilizing it to record the narration for a series of instructional films I am producing. Is the sound obtained with this machine considered of professional quality? In other words, is the quality commercially acceptable? I plan to transfer the original sound recorded with this machine to sound striped release prints by direct re-recording. Are there any hazards to be encountered here?*—R. R. L., Portland, Oregon

A.—General Film Laboratories, in the April, 1961 issue of its monthly publication, *Rewind*, featured a comprehensive article dealing with the recording of magnetic sound on striped 16mm film which we believe will answer most of your questions. We have prevailed upon General to permit us to condense and reprint the article here, hoping it will prove helpful to you and to a number of other readers who have written to us on the same subject.

Bell & Howell Company in 1952, introduced its 16mm projector capable of reproducing not only the standard 16mm optical sound track, but equipped also to record, erase, or play back sound on a magnetic stripe applied to the edge of a 16mm film.

Much was promised by the new type of sound projector ("Now, you too can be a sound motion-picture producer!"), and many new problems were raised ("How do I know some joker won't erase my words and put on his own version?" "Will the stripe stick on the film?" "How long will the sound last?").

Now, nine years later, what has happened? What is our experience? How is the magnetic stripe track being utilized?

On the negative side, owning and operating a magnetic projector didn't automatically, of itself, create a capable producer out of just anybody. Some who bought the new projectors and had somewhat vague ideas about the machines helping them solve production or promotional problems were disappointed.

But, on the positive side, the availability of magnetic striping on film and of combination 16mm optical—magnetic sound projectors had certain specific and definite advantages for both the producer and user of educational and industrial films.

First and most obvious, by utilizing a magnetic stripe on 16mm print material and a combination magnetic-optical projector, sound may be easily recorded, erased or changed at will.

Second, a magnetic stripe may be utilized on already processed original or print material to make possible a sound track where optical sound was not provided for.

Third, a magnetic stripe can be varied in width so that, for example, instead of the normal full-width (100 mil) track, a 50 mil track may be placed to cover only half of the width of a normal optical track—so that either the optical or the magnetic sound may be played in projection.

Fourth, within limits magnetic sound striping is the most economical choice for a sound track when film has been exposed in the camera for a single showing and throw-away, or when a very few prints are to be ordered.

This must be measured against the availability of magnetic projectors wherever the film is to be used, and also against the possibility that more prints might be required later on—in which case the standard optical track would eventually be the more economical.

Fifth, a magnetic stripe may be placed on unexposed camera film for single-system projection — recording sound on the location and at the same time as the photography is being exposed. This is a special situation use, subject to most of the limitations that optical single system sound has.

And, sixth, the full width (100 mil) magnetic stripe has the potential of accepting a practical range of sound from approximately 50 to 8000 cycles.

Now, how does theory translate into practice?

Let's take up our last point, first—the quality of the recorded sound. True, the wide stripe does accept the sound range mentioned, but there are other important and limiting factors. On the production side, there is microphone design and placement, acoustics, and the basic compromise on film movement that's necessarily built into a projector-recorder. To be a projector, film movement must be intermittent. To be a recorder, film movement—ideally—should be constant.

Continued on Page 309

ARRIFLEX® 35

a classic in its own time!

This 35mm motion picture camera was literally born a classic. Not through appearance alone . . . but through function and performance! The very first Arriflex 35s, built in 1938, gave filmmakers unprecedented versatility, operating ease, technical capabilities, and money-saving advantages . . through a completely original optical system designed around a mirror reflex shutter. One of the few genuine innovations in cine camera engineering since the days of Lumière, Friese Greene, and Edison . . . the mirror reflex shutter is today's most desired and most imitated motion picture camera feature. It provides continuous through-the-lens viewing while filming . . . eliminates parallax! And it all but antiquates an assortment of finder correcting gear most other cameras still require. Wherever film releases must meet the highest standards of theater-quality, Arriflex 35s are chosen. They're lightweight, so they make excellent newsreel and location cameras, rugged, so they can take extremes of climate, dependably precise under all conditions . . . ideally suited for every assignment from missile tracking to full-scale studio productions!

ARRI

Write today for complete literature

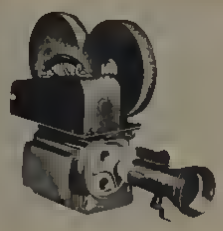
INCOMPARABLE VERSATILITY! The Arriflex 35 is shown as a hand camera (left), with 400 foot magazine, matte box and 16 volt variable speed DC motor, and as a studio sound camera, fully blimped with 400 foot magazine (center), and with 1,000 foot blimp (right)

ARRIFLEX CORPORATION OF AMERICA 257 PARK AVENUE SOUTH, NEW YORK 10, N. Y.

F & B
MAGIC MYLAR
A New Splicing and Repairing Technique
NOW IN NEW 20 FT. ROLLS!
only $2.20 for 16mm
$4.04 for 35mm
REPAIR Torn, damaged films & film strips, patch cuts, tears, gouges, nicks, burns, etc.
REPLACE Torn perforations — on sound or silent films & film strips — missing pieces of film — restore torn-out bits of film —
BUTT SPLICE Without losing a single frame of your film strip or 16mm movie film—butt splice leaders and tails — no cement or splicers needed —
STRENGTHEN OVERLAP SPLICES
Placing a frame of Magic Mylar over your regular over-lap splice absolutely prevents it from ever opening —
Use Magic Mylar white opaque tape for splicing magnetic film—or for visible splices in darkroom processing
Florman & Babb, Inc.
68 W. 45th St., N.Y. 36, N.Y.
Please send me
☐ 20 ft rolls — transparent 16mm — single perforation (T16S) at $2 20
☐ 66 ft. rolls — transparent 16mm — single perforation (T16S) at $6 00
☐ 20 ft. rolls — transparent 16mm — double perforation (T16D) at $2 20
☐ 66 ft rolls — transparent 16mm — double perforation (T16D) at $6 00
☐ 20 ft rolls — transparent 35mm (T 35) at $4 04
☐ 66 ft rolls — transparent 35mm (T-35) at $11 00
☐ 66 ft rolls — white opaque — 16mm — magnetic film only (0-16) at $6 00
☐ 66 ft rolls — white opaque — 35mm (0 35) at $11 00
☐ ¼" splicing tape for magnetic tape (S4) at $ 57
SPECIAL INTRODUCTORY KIT:
1 20' roll T16 ($2 20)
1 20' roll T35 (4 04)
F & B Film Repair & Butt Splice Block (18 65)
($28 16)
☐ Special Introductory Kits at only $14.50
Name
Address
City

WHAT'S NEW

IN EQUIPMENT, ACCESSORIES, SERVICES



CINE-VOICE CONVERSION

Florman & Babb, Inc., 68 West 45th St., New York 36, N. Y., announces a new, improved, Cine Voice conversion for 400-ft and 1200-ft Mitchell magazines. Important new feature is true torque motor, powerful enough to pull an entire 1200 ft film load. Motor cooling is effected even during continuous operation, through a new and unique system which causes it to idle at reduced (1/3) power, when film is running through, it resumes full power.

Other important features include rear camera running light, a motor housing which completely encases the torque motor and Veeder counter, affording complete protection and insulation against weather, etc., and an effectively silenced Veeder counter.

The F&B conversion accepts 400 ft and 1200-ft Mitchell magazines, includes torque motor and belt, costs $445.00, and may be adapted to any model Cine-Voice camera.

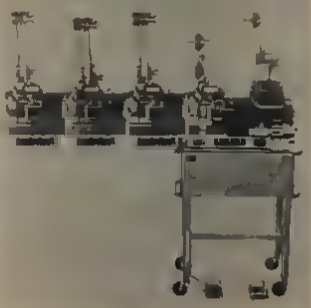
Delivery in 15 days. Also available are two accessories: behind-the-lens filter slot, $15.00, and lens turret lock, for zoom lens operation, $25.00.

ARRI LENS EXTENSION TUBE

An extension tube (right) which changes the effective focal length of Arriflex lenses for closeups is made by Birns & Sawyer, Hollywood. The extension tube is designed so that it can be used singly or in multiples. Construction is rich looking, black anodized aluminum, precision turned. Priced at $18.00, it is available from dealers or from Birns & Sawyer Cine Equipment, 6424 Santa Monica Boulevard, Hollywood 38, California.

NEW 10-TO-1 ZOOM LENS

The new 10-to-1 (25mm to 250mm) Angenieux zoom lens is now available on order from Mitchell Camera Corp. Shipments are being made within 30 days following receipt of orders, the company states. Full information is available from Mitchell Camera Corp., 666 W. Harvard St., Glendale, Calif.



ADD-A-UNIT EXTENSION PLATES

The Camera Mart, Inc., 1845 Broadway, New York 23, announces its new Camart Add A Unit Extension Plate for Moviolas, designed for greater flexibility in adding extra sound heads to Moviola Series 20 editing machines. The Add-A-Unit plate is instantly attached to the Moviola without drilling into the cabinet and bolting it to the chassis. Unit permits adding two additional sound heads to a Moviola so that film editor can check three separate sound tracks, if necessary. New, reduced price is $259.50.

LEVITAN FILM COMPUTER

The Levitan Film Computer, distributed by Camera Equipment Corp., 315 W. 43rd St., New York, N. Y., is a 4-way pocket-size computer for film production personnel and advertising agencies dealing in TV film commercials. Computer indicates time, footage, film frames and the number of words of narration or commercial spiel in any given time period for

Continued on Page 272

Inspect every foot before it leaves your plant with the HFC High Speed Heavy Duty Inspection Projectors -- 16mm & 35mm models now available.

NEW

The projector is a converted front shutter Simplex with a two pin intermittent 16mm or 35/32 film runs at a speed of 144 ft. per minute while 35mm film runs at a speed of 165 ft per minute

1. A variac controls the light intensity
2. A 500 watt lamp is used for 16mm and a 1,000 watt for 35mm (a blower is used to cool the lamphouse)
3. A 2½ inch projection lens is furnished with each unit
4. A start-stop lever controls the power to the lamp and motor.
5. The magazine and take up core takes up to 3,000 ft of film
6. Upper guide rollers are made to handle the film from either direction of the feed reel
7. A free wheeling take off flange is provided in the magazine
8. A lamp near the takeup reel permits hand inspection of the film prior to takeup

NOUVEAU

Le projecteur contient un obturateur Simplex anterieur transformé avec deux clavettes intermittent Les films de 16mm ou 35 32 tournent avec une vitesse de 144 pieds à la minute, tandis que les films de 35mm tournent avec une vitesse de 165 pieds à la minute

1. Le regulateur de voltage d'intensité d'eclairage
2. La lampe de 500 watt est nécessaire pour les films de 16mm, et de 1000 watt, pour les films de 35mm (un ventilateur est mise pour rafraichir la chambre de la lampe)
3. L'objectif de 2½ est instalé.
4. La manette de mise en marche et d arret controle en meme temps la lampe et le moteur.
5. La boite de films avec noyau peut contenir 3000 pieds du films.
6. La roue supérieure est construite de manière de recevoir le film dans les deux directions, nourrie par la bobine centrale
7. Une roue est instelée pour libérer rapidement le film de la boite.
8. La lampe se trouve pres de la bobine recepteuse, et donne toute facilité pour inspecter le film a main dans le projecteur

NUOVO

Questi proiettori sono Simplex transformati, otturatore al fronte, meccanismo di scatto di due punte La velocitá di proiezione in 16 o 35/32mm e di 144 piedi per minuto, e in 35mm, di 165 piedi per minuto.

1. Controllo menuale delle luminositá della lampada.
2. Lampade di 500 watt per 16mm e di 1000 watt per 35mm.
3. Obbiettivo di proiezione di 2½".
4. Maniglia per controllo di motore e lampada di proiezione.
5. La cassetta porta pellicola puo contenere 3000 piedi
6. I rulli superiori di guida sono construiti per operare con film provenente di ambi leti delle bobina svolgitrice
7. Disco con montature sporgente nel magazzino
8. Una lampadina illumina la bobina avvolgitrice permettendo l'ispezione manuale del film prima che si avvolga nel proiettore.

NUEVO

Esta máquina es un proyector simplex convertido, obturador al frente y movimiento intermitente a doble grifa. Para 16mm o 35/32mm, le velocidad fija de proyección es de 144 pies por minuto, para 35mm es de 165 pies por minuto.

1. Un reostato controla le intensidad de la lampara de proyección.
2. Para 16mm se usa una lampara de 500 watt, y una de 1000 watt para 35mm (un chorro de aire ventila las lámparas en ambos casos)
3. Cada unidad está provista de un lente de proyección de 2 pulgadas y media.
4. Una palanca de control opera el motor y la lampara simultaneamente.
5. Capacidad de proyección: rollos de hasta 3000'.
6. Los rodillos de guia superiores operan con la pelicule en embas direcciones.
7. La tapa de la bobina de carga es desenroscable.
8. Una lámpara ubicada junto a la bobina de toma permite la inspección manual de le pelicule antes que se rebobine en la bobina superior del proyector

HOLLYWOOD FILM COMPANY

REELS / CANS / CASES

956 N. Seward, Hollywood 38, Calif., HO 2 3284 • 122 W. Kinzie, Chicago 10, Ill., 644 1940 • 524 W 43rd St., N Y 36, N.Y LO 3 1546

PRECISION® FILM EDITING EQUIPMENT

Precision Unitized Film Synchronizer

PRECISION LABORATORIES
DIVISION OF PRECISION CINE EQUIPMENT CORPORATION
928-930 EAST 51st ST BROOKLYN 3 N Y

PATHE PRESENTS:
THE WEBO-M
16 MM REFLEX

PATHE PRODUCTS, INC.
9 Pleasant Street
Providence 6 Rhode Island
Sole U.S.A. Agents for Pathé Société Commerciale et Industrielle

16MM
COLOR and B-&-W
Processing and Printing
A&B Roll Conforming
Sound Transferring
Write For Complete Price List
MIDWESTERN FILM LAB
161 W. Huron St., Chicago, Ill.
Phone: 664-8410

WHAT'S NEW

Continued from Page 270

35mm, 16mm or 8mm films

Commercial film standards are shown with diagrams and markings that list footage and sound track lengths for 1-minute, 20 second and 10-second TV commercials. On reverse side of computer is photography-projection chart that lists both live action and animation shooting fields and safety projection areas for both motion picture projection and television.

A fourth feature is the Standard Wipe Chart illustrating 120 of the most frequently used wipes in their logical sequence. List price of computer is $1.00.

SUN GUN CONTROL UNIT

Sylvania Electric Products, Inc., 730 3rd Ave., New York 17, N. Y., is marketing a new electronic power control unit called Sylvac for regulating the light output and color temperature of Sun Gun photo lights when used for professional photography. The Model SV-9 operates from standard 120 volt A.C. current. At this voltage, a simple adjustment of the controls varies light output of a Sun Gun from zero to full brightness, or permits selecting color temperatures up to 3400° K. Unit weighs 4 lbs., is 7"x6¾"x3½" in size.

A second model, SV-20, will accommodate two 1000-watt Sun Guns or several photolamps up to 20 amperes. The same control results may be had with this unit as with the Model SV-9.

Simultaneously with announcement of its Sylvac control units, Sylvania also announced two new voltage boosters for use with Sun Gun photo light equipment under sub-standard voltage conditions. Designed for use in conjunction with the Sylvac controls described above, the Flexi core Voltage Boosters make it possible to attain the

Continued on Page 309

Originals Only ...PLEASE!

SIGHT or SOUND *If your editor isn't used for ORIGINAL PRINTS - - then you need the*

S.O.S. EDIOLA® 16mm ACTION VIEWER AND SOUND READER

Model AO 16mm includes Viewer, Optical Sound Reader, Matched Amplifier/Speaker and Sub-base. **ONLY $362.24** *Write for brochure*

S.O.S. PHOTO-CINE-OPTICS, INC. formerly S.O.S. CINEMA SUPPLY CORP.
602 West 52nd St., N.Y. 19—Plaza 7-0440—Telegram "FAX, N.Y."
Western Branch: 6331 Hollywood Blvd., Hollywood 28, Calif. — Phone 467 2124

SEE OTHER S O S OFFERINGS ON PAGES 298, 302, 306 AND 309

"The Balcony"—

George Folsey, ASC, for many years a top director of photography at MGM, photographed such memorable pictures as "The Ziegfeld Follies," "Meet Me in St Louis," "Green Dolphin Street," "Seven Brides For Seven Brothers," and "Executive Suite." Of his recent experience in photographing "The Balcony," he says "I can't think of another picture that I've enjoyed more, had less trouble with and more satisfaction in doing."

By HERB A LIGHTMAN

EASILY THE MOST unusual American film of this season (and quite possibly any other season) is the currently-released filmization of Jean Genet's controversial play, "The Balcony," directed by Joseph Strick ("The Savage Eye") and artfully photographed by George Folsey, ASC.

Made on a "quickie" budget of $112,000 with top-flight actors (Shelley Winters, Peter Falk, Kent Smith, Lee Grant) and key technicians working at scale against a deferred percentage of the profits, "The Balcony" is not a quickie in any sense of the word. It was made entirely in Hollywood on a six-week shooting schedule, with a 22-man crew. Definitely slanted toward the relatively small, unusually sophisticated segment of the filmgoing audience that regularly patronizes art film houses, the picture proves that the well-made art film need not be an exclusively European monopoly, and that such films can have the technical finish and professional quality of Hollywood's best product without resorting to the frantic pace of television film production or the expenditure of a great deal of money.

Almost the entire action of "The Balcony" takes place inside a cavernous movie sound stage representing a unique sort of "establishment" set up to cater to the bizarre whims and fantasies of an all-male clientele that comes there to escape "from the falseness of life into the greater reality of their dreams." On hand to help enact any desired charade is a bevy of beautiful and not-so-beautiful actress-courtesans surrounded by a conglomeration of stage flats, costumes, props and backdrops that are used to create whatever atmosphere the client may require. "We sell illusions," explains Miss Winters, the den mother of this menagerie, in what turns out to be a colossal understatement.

Outside the sound stage, via some superbly edited newsreel footage, a revolution rages through the streets of a nameless city. But inside the dreamy oasis of the establishment business proceeds as usual with a plumber making like a bishop, a baker impersonating a cavalry general and a mousy accountant slithering down off the judicial bench to carry on like the most masochistic jurist imaginable.

Into this never-never land stalks the Chief of Police, representing the incumbent government of the unidentified locale. He is a scrappy, paranoiac,

Cinematic Illusion Without Confusion

Product of a six-week shooting schedule, "The Balcony" is replete with unique and imaginative photographic touches that add luster to an off-beat story.

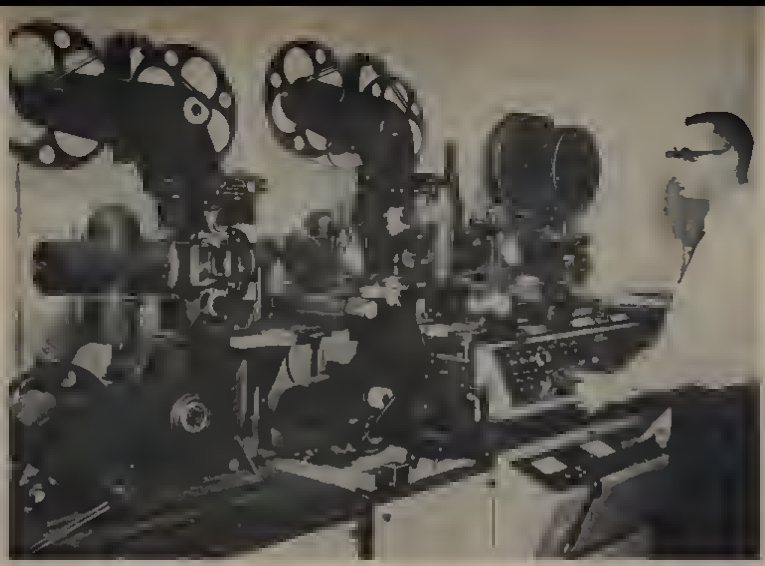
richly uniformed type who harangues the populace via radio from within the confines of the sound stage. His speech is a masterpiece of double-talk demagoguery expounded in a furious jargon consisting of idiotic cliches borrowed from real-life political oratory and TV commercials.

The Chief successfully turns the tide of battle in his favor by setting off remotely controlled explosions that raze the entire rebel sector of the city. Afterwards, in order to present a powerful front to the people, he enlists the aid of the plumber, the baker and the accountant to play the roles of dignitaries who have been liquidated in the conflict.

Dressed in the borrowed raiment of a bishop, a general and a judge, the unlikely trio rides in a motorcade through the city, making pompous speeches as empty as those characteristic of the real

Continued on Page 298

SHELLY WINTERS, who plays a queenly madam in "The Balcony," rehearses with the costumed staff of her unique establishment. Here cinematographer Falsey artfully contrived the lighting to paint up the bizarre aspects of the scene



COMPLEX AND COSTLY machinery such as this is required for making complicated optical effects such as seen in so many of today's TV commercials. Here Don Wertman pushes button on the Oxberry optical printer at Cineffects Studio in New York to start the film for a special effects assignment.

The Producers Service House—Vital Aid To Film Makers

A boon to the producers of TV commercials, they also enable the small producer to embellish his films with opticals and other professional effects that are beyond the capacity of his limited equipment.

By VERN W. PALEN

WHY IS THE PRODUCERS service business booming? To get the answer to this question, the author visited the studios of Cineffects, in New York City. Irving Hecht, president, Jack Present, production manager, and Robert Pittluck, general manager, escorted me on a tour of the premises. After that, we spent a couple of hours in conference.

The pressure of TV deadlines and the complexity of work being done for TV commercials requires a very large work capacity at times. A producer may have a campaign involving one or two spots which demand a tremendous amount of effort, with the corresponding need for a lot of equipment to do the particular job.

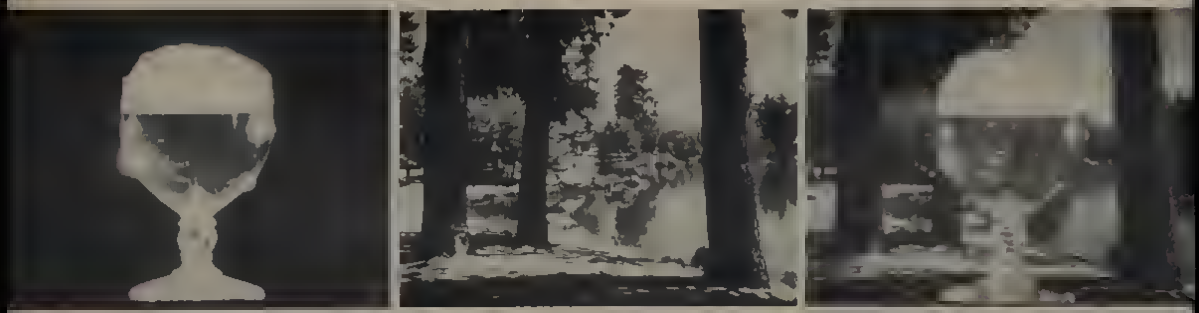


FIG. 2—THREE PHASES in the production of a TV commercial for a popular beer are pictured above. The required effect was that of the background scene (middle photo) showing through glass of clear beer (first photo). The effect was accomplished by using color separations from a color negative to make mattes of the glass of beer, then running the various elements through the optical printer. This procedure permitted the desired control in exposure to achieve the smooth, professional results shown in third photo.

In both New York and Hollywood, the accelerated growth of film service organizations has been largely due to the expanding TV market with its big pressures for time and ever-increasing complexity of the services required. This involves opticals and animation work and few producers can justify the staff and equipment they would need to perform such activities in their own studios.

Obviously, a producer experiences both surges and lulls in his assignments. The problem, therefore, of being staffed and equipped for the heavy periods would pose an impossible economic situation during the slow periods. Since the service house handles hundreds of customers in contrast to a producer's one or two, many people and many machines can be utilized at full capacity the year round.

The average producer gets his script or story board in rough form from the advertising agency. He has the necessary facilities to put the story together on film in the form of individual scenes. He makes up a work print which is viewed, criticized and discussed with the agency. Once the work print is approved and sound is edited, it is ready for opticals. Today, the complexity of the opticals demanded by agencies makes this a job for experts who can devise new tricks which will accomplish the purpose.

One of the tasks the service house must perform quite frequently involves a scene where a person is watching a movie or a TV set with a live picture in action on the screen. To do this wth live shooting makes the job almost prohibitive since it requires use of a camera and projector operating in sync, making the project much more complicated and expensive. It is much simpler to shoot the two scenes separately and give them to a service house to combine. Fig. 3 shows an example where a movie on a screen is combined with a live action scene of a family in the living room.

A job recently completed for the U.S. Army Signal Corps required three images on three TV monitors in a color scene of a control room. The sequence also required multiple changes in the images on the monitors in order to simulate conditions where a monitor shifts scenes and where the operator shifts scenes from monitor to monitor. The service house handled this problem by shooting multiple mattes on its Oxberry animation stand, using drawings of the TV monitor screens properly positioned on the background scene.

First, it was necessary to make a series of bold-back mattes, which allowed the background scene to be exposed separately four each monitor. Using the mattes and interpositives or fine grains on an Oxberry optical printer where exact control can be maintained over positive and exposure, the composite scene was recorded on one film to give the desired effect.

Because the producers service house handles such

FIG 3—A familiar effect often attempted by inexperienced film makers with straight photography The movie scene on the home movie screen was combined with the live action scene of family in living room by traveling matte process on optical printer

a large volume of work, special techniques have been developed and optical equipment of the most advanced design is employed. Motorized animation stands permit precise projection of scenes for preparing the shooting mattes. Special techniques have been devised for handling the mattes on the optical printers in order to assure accurate registration. These machines have aerial image projectors and many other new features which afford complete flexibility in combining mattes and in repositioning scenes.

The Signal Corps job mentioned earlier was made more complex, too, because color had to be balanced in all scenes to provide a realistic and

Continued on Page 294

FIG 4—Familiar to TV viewers is this shot from a commercial for Peter Pan peanut butter The live Peter Pan and the jar of peanut butter were photographed separately and later combined in this composition by traveling matte process

RALPH WOOLSEY, behind boom-mounted camera shooting a TV film for Warner Brothers on location near Hollywood

Interview with Ralph Woolsey, ASC

SOME ASPECTS OF PHOTOGRAPHING FILMS FOR TELEVISION

Here is an expert look at television film production today by a director of photography who has photographed both television films and feature productions. In this interview with Ralph Woolsey, ASC, some interesting aspects of photographing films for various TV film series are explored and compared with feature film photography.

***Q*—Mr. Woolsey, viewing television film production objectively today what, in your opinion, are the differences if any in the problems encountered by the director of photography shooting films for television as compared with feature films?**

A—One area of difference lies in pre-production preparation. For feature films, a lot more money is usually spent and a lot more time is devoted by each department in the studio in the planning of a picture. This is rarely the case with TV films. When a television film gets under way on the sound stage it happens not infrequently that the script for the picture has just barely been approved. I have at times been assigned to photograph a TV film where the script has undergone many drastic changes before the production was completed. There have been instances where we have photographed sequences and shortly afterward that same day someone would appear on the set with new, revised pages of script for the scenes already shot, and we would then have to re-shoot the scenes in order to incorporate new and different dialogue. This is not typical practice, of course, but it does happen. The most efficient production companies aim to get all scripts fully approved before they start the cameras rolling.

When this happens and the cameraman directing

the photography of the show is given a copy of the script in advance of the show's starting date, it affords him opportunity to study it and plan his lighting and photographic approach.

When a cameraman doesn't see the script until the day he's scheduled to start shooting a show, he goes on the set more or less "cold" and must start working virtually "off the cuff." He can't very well read the script and do his work at the same time.

As a rule, I find it quite satisfactory to work from a story breakdown. There is so much similarity in TV story formats that it is usually no problem to figure out the action and how the story will go. A breakdown provides a synopsis of the action that is to take place on each set in terms of scenes and essential motivation. It indicates also what sets I am to work on that day.

***Q*—Generally speaking, does the technique of lighting for TV film photography differ from that for feature films? And is there any technique or procedure used in feature film photography that is not applicable to shooting TV films?**

A—If we expect the TV viewer to see the action and recognize detail in the picture on the small screens of home receivers, we must use a little broader brush in certain aspects of lighting and photography. In the early days of TV the prevailing idea was that stories should be shot in closeups as much as possible and that long shots were to be avoided. The technical improvements in both today's television sets and in the transmission of video programs invalidates such thinking and the long shot is now as important and generally used in TV films as in features. When so much of the action was played in closeups, the audience lost orientation with the story or its locale. Shooting TV films in the accepted pattern of long shot, medium shot and closeup established for motion pictures in general has greatly enhanced presentation of filmed television dramas.

We used to be told by TV network engineers that there were certain brightness range and contrast limitations to be observed in photographing films for television; that the cameraman must work within these limitations to insure the most satisfactory reproduction of his work on video screens. Experience has proved that these limitations are not as rigid as originally pronounced.

Most cameramen shooting TV films endeavor to keep up with the continuing technical developments in the photography and reproduction of films on TV. Many spend considerable time with engineers and technicians in the industry and in reading the technical journals. I personally have never been one to accede to every demand made by the engineers, yet I have tried to give certain reasonable things. The work of all TV film cameramen still suffers from the lack of DC restoration in black-and-white home receiver circuits; DCR enables a receiver to reproduce blacks as true black and intermediate tones with comparable fidelity so that much more quality of the photography comes through on the TV screen.

***Q*—Has the speed and pressure demanded in TV film production affected the method of lighting sets to the degree that the final print suffers by comparison with prints of feature films?**

A—Generally speaking no. But one must often simplify certain things in lighting sets for TV films where the extra time devoted to lighting for a feature film simply wouldn't pay off.

Continued on Next Page

Ralph Woolsey, ASC, was for a number of years under contract to Warner Brothers as a director of photography. Among the TV film series for which he photographed shows were "Maverick," "Sunset Strip," "Cheyenne," and "Roaring Twenties." He has at various times lectured on cinematography before students of the Cinema Department of the University of Southern California

I know that all the television film I shoot is going to be reviewed by projection on a conventional theatre screen by studio production heads, and I want them to see the best possible photographic result. Producers and directors invariably check their TV film productions in this manner; many of them seldom see the same picture televised. If the photography looks good on a theatre screen, it follows that it also will look good when televised—assuming that transmission conditions and the viewer's set are functioning properly.

***Q*—This matter of good picture results suggests that lighting practice and the lighting equipment used play a major role. Has the photography of TV films brought about the use of any new lighting equipment?**

A—Our basic set lighting hasn't changed much. There have been some improvements made in existing equipment such as high-intensity arc lamps, also some re-designing of conventional lamp housings and accessories. Also, there have been significant improvements made in so-called "boosted-voltage" lighting equipment such as the ColorTrans and Masterlites.

The recently-introduced quartz-iodine lamps hold some promise for lighting small sets. More recently, some manufacturers have developed radically new housings to employ this illumination unit, enabling it to produce a variety of light patterns. The March issue of *American Cinematographer* featured an article describing the new quartz-iodine photo lamps developed by ColorTran, which utilizes this efficient light source in a reflector that affords a range of beam configurations and illumination volume. However, no one to date has successfully combined the Q1 lamp with a lens-reflector combination that will provide positive beam control similar to our present standard spotlights.

Still another advancement in lighting equipment that has seen little application in film studios is the solid-state dimmer. This is a silicon-controlled rectifier now popular in theatres and some television studios. It requires alternating current whereas most Hollywood film studios utilize direct current for set lighting—chiefly because of the large number of arc lamps used in set lighting. The new silicon rectifier-dimmers are remarkably compact and offer simplified remote and pre-set advantages.

***Q*—Do you use much arc lighting today in set illumination for TV films?**

A—I often use arcs for lighting large sets, but rarely for small interiors. When working on exterior sets, arcs are used to enhance sharpness of detail. Outdoors, arcs are also used for booster light and for illuminating some night scenes.

One thing about TV filming, you shoot hot or cold, rain or shine. I have shot scenes in pouring rain and the rain didn't show up on the screen. In one sequence, the rain became so heavy that it began to show on the actors' clothes. The script was quickly re-written to coincide with the rain. But before we could finish the sequence, the rain stopped and we had to move rain-making equipment to the location to complete the sequence with photographic uniformity.

It is often surprising how difficult it is to make falling rain visible in exterior scenes, especially when the set is not rigged for backlighting or cross-lighting. Here arc lighting is essential to highlight the rain effect and give the scene a little "snap."

***Q*—Have the faster B&W film emulsions been helpful in photographing television films?**

A—Yes. Emulsions like Eastman's Double-X—perhaps the most important film improvement in recent years—enable me to get good quality plus all the advantages of a high-speed film. Some cameramen believed that when negatives of higher speed became available they would be able to use less light and the studios would consequently save money on lighting bills. But what actually happened is that many cameramen simply stopped down the lens, say from f/4 to f/6.3, and used the same volume of light.

I prefer to flood the existing lights or add diffusion and thus be able to work at the same f/ stop as before. If I need the advantage of the extra stop-down the fast emulsion affords, I can remove the diffusers from the lamps or make the set illumination "hotter."

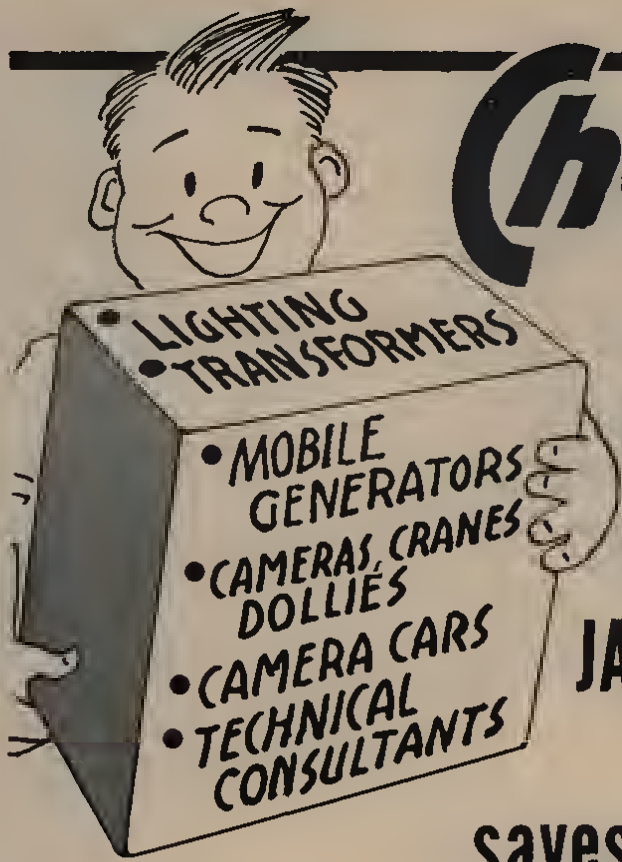
***Q*—Does this mean that you generally avoid detail that is too sharp?**

A—There are often situations where I prefer to keep background detail soft, but the sharpness in the overall picture depends on the magnification relative to audience viewpoint. When we see a picture on the television screen, the reduction in size of the picture in effect increases the depth of field.

***Q*—It would seem advantageous as well as a means of saving time where a cameraman is shooting a TV series, to have much of the set lighting "fixed" or permanently rigged so that it is more or less ready for instant use when he returns to the set each week. What are your views on this?**

A—Where a cameraman is permanently assigned to a TV series there could be advantages in having certain basic backgrounds pre-lit in permanent sets. It happens, however, that in some studios the cameramen shooting established TV series are rotated in their assignments so that a different one shoots a given show each week. And each one, being somewhat of an individualist, has his own ideas how these shows should be lit. There never has been any fixed

Continued on Page 295



Choose the ONE PACKAGE deal from JACK A. FROST!

★

. . saves you TIME and money on PRODUCTION RENTAL needs! . . . .

Gives you Complete, Coordinated SERVICE from START to FINISH!

JACK A. FROST

COBO HALL OFFICE: 401 Washington Blvd
Rm 3143, WO 2-1255, Detroit 26, Michigan

MAIN OFFICE: 234 Piquette
TR 3-8030, Detroit 2, Michigan

CANADIAN OFFICE: 6 Shewbridge,
BElmont 2-1145, Toronto, Canada

SHARP NEGATIVES rate crisp, clear prints. Otherwise, you're throwing away good money, no matter how much you're "saving" on prints. Moral: Go Eastman *all* the way—negative and print stock. And in the case of questions—production, processing, projection—always get in touch with Eastman Technical Service.

For further information, please write or phone Motion Picture Film Department, **EASTMAN KODAK COMPANY, Rochester 4, N. Y.** Or—for the purchase of film: **W. J. German, Inc.** Agents for the sale and distribution of EASTMAN Professional Film for Motion Pictures and TV, Fort Lee, N.J., Chicago, Ill., Hollywood, Calif.

EASTMAN FILM

DESIGNED FOR

■ The advantages of shooting motion pictures with a hand-held camera has had a direct influence on the design of both the newer portable cameras and shoulder-support apparatus for use with conventional cameras, both 35mm and 16mm. On this page are pictures and descriptions of three relatively new cameras with built-in shoulder rests for hand-held shooting plus some interesting supporting apparatus that affords similar convenience for newsreel and other mobile camermen who work with professional 16mm cameras.

PROBABLY THE FIRST AND ONLY portable camera for wide-screen photography with 65mm film is Panavision's Panaflex 65, weighing but 30 pounds, fully equipped and loaded. The 500-foot magazine mounts on the camera at an angle and rests on the operator's shoulder to provide solid support for hand-held shooting. When not used as a hand-held camera, the pistol grip and curved shoulder support are readily detachable so camera may be used tripod-mounted. In the works is a new, improved reflex model having same appearance, positive reflex viewing, and a follow-focus finder and 1000-foot magazines as companion equipment.

THE NEW FRENCH ECLAIR 16MM REFLEX camera is of radically new design, but retains the basic reflex and detachable film magazine features of the Eclair Camerette. Like the Panaflex and the Mitchell Mark II Reflex (pictured below) the new Eclair 16mm Reflex is so designed that the magazine rests on the operator's shoulder to provide support for the camera when used hand-held.

A COMPACT, LIGHTWEIGHT, INVERTED 400-foot magazine that mounts back and below the camera and also provides a rubber-cushioned indenture between the film chambers that serves as a shoulder rest, is a salient feature of the new Mitchell Mark II Reflex 35mm camera. The camera's full aperture 128 fps movement is keyed and can be removed and replaced without need for re-timing. Reflex finder image is exceptionally brilliant. Assuring optimum exposure over entire frame area is a focal-plane variable-disc shutter. A built-in sync signal generator enables camera to be used for synchronous sound recording with remote magnetic tape recorders.

SHOOTIN' FROM THE SHOULDER

THE MOBILE CAMERMAN who works mostly with a hand-held 16mm camera created a need for an efficient and dependable support for his camera, especially when he switched to the heavier Auricon sound cameras or the Arriflex. For a long time he had to make his own, but more recently some excellent supports called shoulder-pods or belt-pods have appeared on the market.

THE SHOULDER-POD PICTURED AT RIGHT is a German-made import that fits all conventional light-weight motion picture cameras such as the Auricons and Arriflex 35mm and 16mm. It leaves the operator's hands entirely free to handle instruments, make camera or sound level adjustments during shooting, or to support himself in precarious situations. Head to which the camera is attached is adjustable for height, direction and distance between operator and camera finder. The supporting bar is also adjustable to allow camera to be used at either left- or right-hand side of operator. Constructed of lightweight aluminum tubing, the shoulder-pod is anchored to operator's waist by means of an adjustable belt.

TV NEWSFILM CAMERMEN and documentary and travel film producers are discovering the advantages of the shoulder-pod, which not only eases the load and provides more comfortable balance of the camera, but enables them to work faster and more freely in crowds or confined locations.

MEETING THE NEED of peripatetic cameramen for a simple, lightweight shoulder-pod is the S.O.S. Body Brace pictured at right. It offers the double support of a shoulder-pod plus a body brace, providing steadiness, comfort for the cameraman and the ability to aim, tilt, and pan the camera with the same ease as when tripod-mounted. Made of lightweight cast aluminum, it weighs 4½ pounds, and is furnished with standard 3/8" X 16 camera tie-down screw. As pictured, it will easily support the heavier professional 16mm cameras such as the Auricon Pro-600, Arriflex, Maurer, etc. An important feature is collapsible design of the brace, permitting it to be folded compactly for easy storage in camera equipment case.

For source information, see page 294.

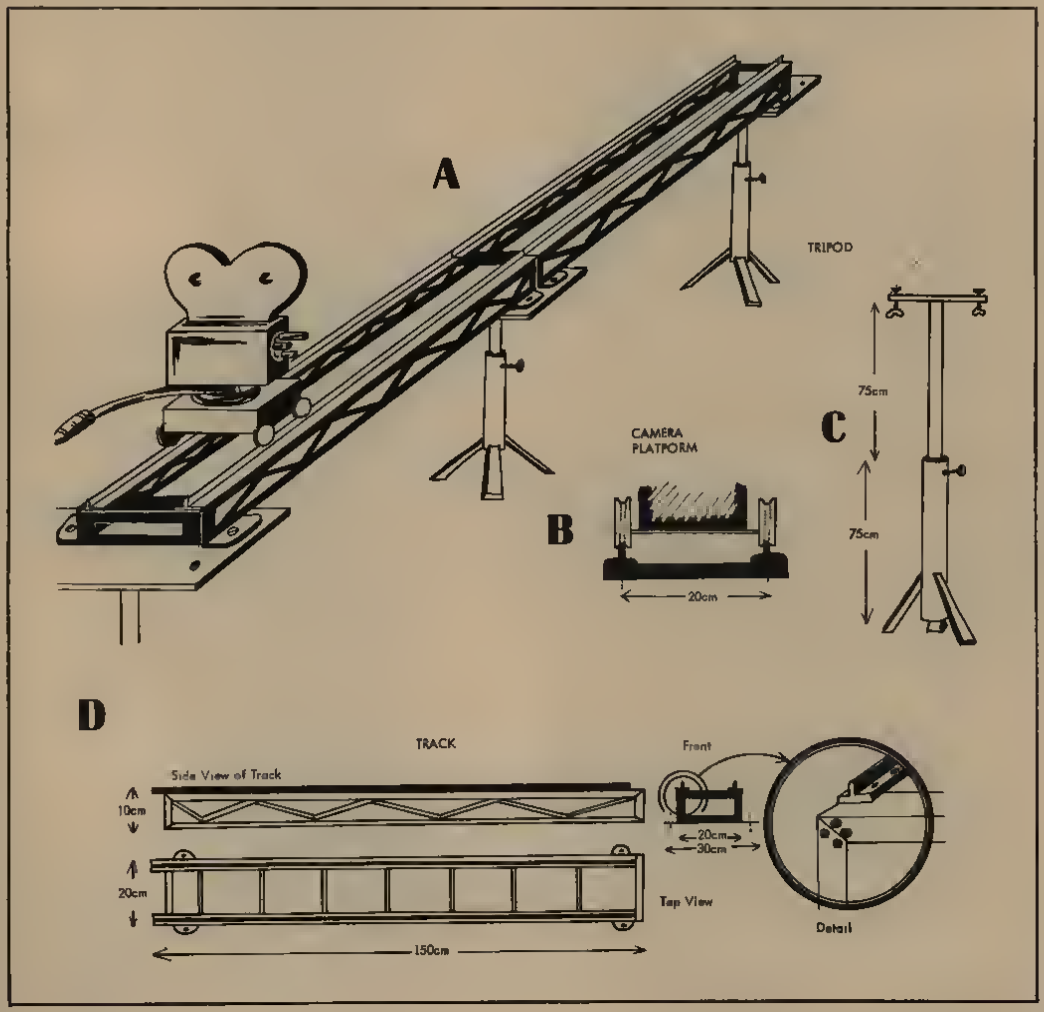
'POCKET-SIZE' CAMERA DOLLY

Affords major production camera mobility on a popcorn budget.

By LEO OZOLS

IT OFTEN HAPPENS in the production of commercial, industrial or documentary films, that the cinematographer must forego the convenience of a camera dolly and tracks because of budget limitations or the great bulk of such equipment, or both, and must limit his camera action or movement to simple panning.

A solution to this problem is a lightweight, portable dolly and tracks which almost any cameraman, with adequate mechanical assistance, can construct himself. Instead of the conventional burdensome dolly, a small, lightweight camera platform on wheels rolls along lightweight, knockdown tracks that, instead of being laid on the floor or ground



are waist-high and supported by adjustable stanchions. (See diagram.)

In my experience of shooting documentary films in remote areas of South America, I have often encountered the need to give my camera mobility. Except for some high-budget productions which could afford dolly equipment, I invariably had to restrict camera movement to panning and tilting.

There frequently were assignments, usually in some new and distant location, where I found myself improvising some device to give mobility to the camera for dolly and traveling shots. It is quite impossible to transport a conventional camera dolly and tracks into the South American wilds; there is no safe and easy way to transport such equipment and the necessary crew and expense would make the production unprofitable. The frequent frustrations which I encountered set me to thinking of ways and means of solving the dolly problem, for me at least, and the equipment illustrated in the accompanying diagram is the result.

I first got the idea for the portable, elevated dolly and tracks when shooting a film in Puerto Rico for the Roosevelt Foundation. Ed Frank, the director, along with a child actor, had come all the way from the United States, and I had journeyed from Venezuela to photograph the picture — only to discover that no camera dolly and tracks were available on the whole island.

Observing the Puerto Rican children racing on the streets with tiny cars made of a piece of lumber and four ball-bearing wheels taken from roller skates gave me an idea. I borrowed one of these from a group of kids and used it as a camera dolly, securing a tripod-mounted camera upon it and using only the street pavement as tracks. Further development of the "pocket-size" dolly evolved when I was commissioned to shoot a commercial film for Alcoa Aluminum. This time I used a toy car for a dolly, mounted an Arriflex camera upon it, and rolled it on a long table which served as dolly tracks. The resulting traveling shots came out very well.

When I returned to Venezuela, following my appointment as Director of the Motion Picture Department of the Los Andes University, I again encountered the problem of no camera dolly. There were no funds to purchase one and as my next project demanded the use of a dolly, I drew upon my previous Puerto Rico experiences and came up with an idea which was subsequently approved by the authorities. In the mechanical shop of the University we began to build it. I put it to use as soon as construction was completed and the results more than justified the effort. I was able to make dolly and traveling shots comparable to Hollwood's standards. It is so constructed that the entire equipment can be disassembled and stowed in a Jeep or car in a matter of minutes, and it can be reassembled by one man, if necessary, in a few minutes. No trained dolly crew is required to operate the dolly. As a matter of fact, we use only one man to handle it, and there have been instances where the camera operator alone has managed both the camera and the dolly in making moving camera shots with the equipment.

TRACK SIMILAR TO author's but of heavier construction was used by cinematographer Joseph Brun, ASC, in photographing scenes in Puerto Rico for "Eladio," which he also directed. Photo shows how the camera operator effects a traveling shot by walking alongside the waist-high tracks and moving the dolly mounted camera as he goes

DIAGRAM AT LEFT illustrates author's "pocket size" camera dolly and tracks, also details of various components. "A" is view of the equipment erected for use. "B" is cross-section detailing the camera car platform, with its grooved wheels which ride on thin metal rails. "C" shows details of the telescoping, adjustable tripods or stanchions which support the tracks. "D" affords both top and side view of track construction

Construction

The various components of the equipment are illustrated in the diagram. "A" is a sketched view of the equipment in use. "B" is a cross-section detailing the camera platform with its grooved wheels which ride on thin metal rails. "C" shows details of the telescoping, adjustable tripods or stanchions which support the tracks. "D" affords both top and side view of the track construction plus details of the assembly of the metal components of same.

Depending upon the length of the dolly tracks, as many as 3, 4 or more tripods may be required to provide solid support. These are adjustable for height to accommodate the convenience of the camera operator and also to enable the tracks to be used on uneven terrain; here height of the tripods is adjusted to the uneveness of the terrain — much

Continued on Page 296

THREE 16MM CAMERAMEN (one out of view in rear) prepare to shoot exciting motorcycle act in Japan for NBC's "International Showtime," weekly TV series

LOOKING OVER shoulder of one cameraman shooting mixed animal act in Japan for "International Showtime." Camera is Mitchell 16—one of three cameras used in NBC's Synchro 16 Color system, a new, unusually fast production technique ideally suited to photographing program material of this sort

Shooting "International Showtime" In 16mm Color

16mm color film proves more than adequate for "International Showtime's" debut in growing circle of color TV shows.

By JOSEPH HENRY

NEWSREEL-TYPE PRODUCTION tempered with television techniques may pave the way for wider use of 16mm color film in photographing TV shows on location.

That's the outlook based on NBC's experiences with "International Showtime," an hour-long weekly program featuring foreign circus and ice skating acts.

Thus far, six shows have been filmed in 16mm color and all, according to Norman Grant, NBC's director of color coordination, have been "commercially acceptable" for television.

It was the first time that Grant's Synchro-16 "on location" shooting technique was used for the show. The technique involves use of three motion picture cameras shooting in sync—one equipped with a zoom lens. The cameras simultaneously shoot the acts from different angles to provide variety in the cutting. The sound is recorded on tape in sync with the cameras and combined with the picture when prints are made by the laboratory.

"With this type of show, where filming is done in the field under inflexible time schedules, 16mm color is practical, financially and operationally," Grant explained. "The quality is not up to the standards of 35mm color," Grant said, "but, by and large, NBC has been generally successful with 16mm color."

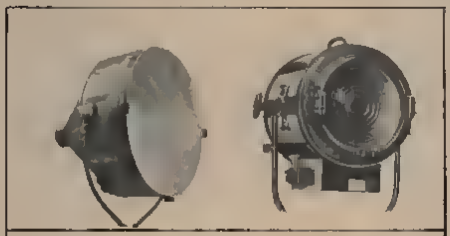
NBC's "David Brinkley's Journal," "The River Nile," "Vincent Van Gogh—A Self Portrait" and "Shakespeare—Soul of an Age" have all been successfully filmed for television in 16mm color. Other NBC productions using some 16mm color are Sports International," "All-Star Golf" and "Wild Kingdom."

Program-wise, Grant and "International Show-

Continued on Page 303

4 PRODUCTION HEADACHES

WE CAN SOLVE WITH CONFIDENCE!



1. LIGHTING

2. GRIP EQUIPMENT

3. PROPS

4. GENERATORS

1800 1600 1000 Amp D C Trucks
700 Amp D C Trailers
100 50 30 20 A C

We are Sole Distributors of

Mole-Richardson Co.

Products in New York City

RENTALS SALES SERVICE

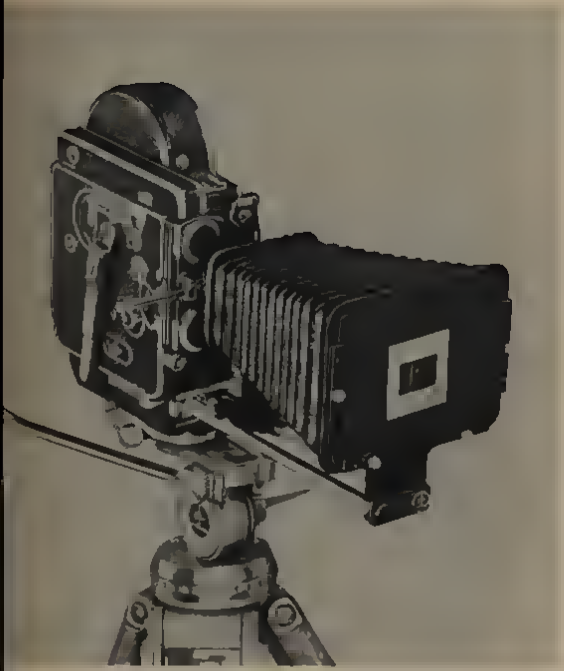
Send for a schedule of rental rates

Since 1921

Charles Ross INC

LARGEST SUPPLIERS OF MOTION PICTURE, TV AND INDUSTRIAL PHOTOGRAPHIC EQUIPMENT IN THE EAST

333 WEST 52 STREET, NEW YORK 19, N Y, CIrcle 6-5470



THE BOLEX MATTE BOX mounted on sturdy rails before Bolex H Rex 16mm camera, showing method of use for copying 35mm slides

A MATTE BOX FOR PRODUCING EFFECTS IN 16MM

By ERNST WILDI

PROFESSIONAL 16MM FILM makers, especially those small independents who turn out TV commercials for their local stations and others, encounter almost daily problems in producing special effects —a film technique that is increasingly demanded in the production of commercials and in industrial, training, educational and technical research films. Working on modest budgets that invariably preclude the inclusion of any but the simplest of optical effects in their productions, many of these producers are taking a page from early day film makers and are now making their effects in the camera using a matte box.

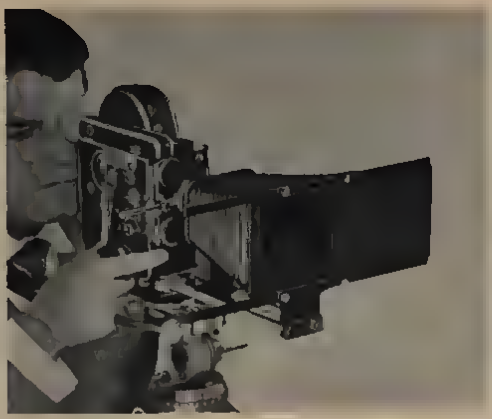
Fades and lap-dissolves of laboratory quality can be made in those 16mm cameras having a variable shutter that can be automatically controlled and where the camera also provides a means of back-winding the film in the camera. With the addition of a matte box, the range of special effects possible is extended to include wipes, split-screen shots, mask shots such as the familiar binocular and key-hole effects, and many others.

Paillard, manufacturer of the Bolex camera, offers a matte box for 16mm cameras of excellent professional design which any 16mm cameraman will find extremely helpful in the production of a wide range of cinematic effects. It is pictured in Fig. 1, quite logically mounted before a Bolex H-16 camera—although it is adaptable to other 16mm cameras of similar size.

For the production of special effects in the camera, the matte box used should be of the adjustable bellows type with movable front and rear frames—which the Bolex matte box is. Since many of the masks necessary for producing effects must be placed several inches ahead of the lens in order to insure the desired degree of sharpness in outline or line of demarcation in the film image, the front frame of the matte box should be adjustable to at least 7 inches away from the film plane. The matte box should be firmly mounted to the camera body and should provide adjustment for centering mattes accurately in front of the taking lens. All this, of course, is also possible with the Bolex matte box.

Additionally, the camera operator must be able

WITH MASK inserted for binocular shot



THE MATTE BOX set up for making simple split-screen shot

USING TWO MASKS with V shape cuts and sliding the two together as scene is shot, produces unique diamond shaped iris out effect

to check, preferably by viewing through the taking lens, to determine if masks are properly centered in the box, if they are positioned at the proper distance, if they are properly sharp in detail, and what stop must be used to achieve the desired depth of field. A reflex camera affording ground glass viewing and focusing, such as the Bolex H-Rex 16 is ideally suited for this work.

The production of matte box effects requires a wide angle lens on the camera—usually a 10mm or 17mm for 16mm cameras.

Range of effects

In the following paragraphs, the most popular uses for the matte box will be described:

The matte box as a sunshade: The Bolex matte box makes a most efficient sunshade. It can be extended to eliminate all unnecessary light reaching the lens and works well with all but the longest focal length lenses. For further protection with telephoto lenses, a cut-out rectangular mask can be inserted in the front frame.

The matte box as a filter holder: This is among the most popular uses of a matte box, since many of the light-balancing and color-correction filters are available only in gelatin squares. Since the gelatin material is thin and flexible it is usually mounted in a cardboard frame. Most matte boxes have grooves to take two filter mounts of this type.

For copying slides and movie frames: The matte box makes an ideal support for copying color slides and movie frames. The slide to be copied is mounted on a cardboard panel into which a rectangle the size of the slide has been cut. A thoroughly cleaned glass plate also can be used, in which case the slide

Continued on Next Page

METHOD OF shooting title text lettered on translucent panel with small cut out to show scene in distance

FOR EFFECT of camera moving through keyhole, mask is mounted in rear frame of matte box and moved toward lens while filming

Advanced thinking produces timeless designs This proven Mitchell philosophy now expresses itself in the Reflex The Mark II is only the first of a series of Reflex cameras for both the 35 and 16mm fields "Reflex" or "Rack-Over" there is a Mitchell camera for your application

For superior camera maintenance, reconditioned camera equipment, new project developments or new Mitchell camera information, write on your letterhead to Sales Department

MITCHELL
CAMERA CORPORATION
666 W HARVARD STREET • GLENDALE CALIF

NOW REPRESENTED IN OVER 45 COUNTRIES THROUGHOUT THE WORLD AGENTS IN YOUR COUNTRY ON REQUEST

MATTE BOX FOR EFFECTS

Continued from Preceding Page

is masked off with black paper or tape This latter method is particularly recommended for copying movie frames

The illumination required for such copying consists of a regular photo flood studio light or SunGun placed several feet in front of the matte box, and with an opal glass placed between light and slide

"Freezing" an image. In this frequently-used and effective professional technique a subject is first seen completely stationary—as in a still photo—then suddenly starts to move Perhaps the scene might open with normal movement then suddenly "freeze" for a few seconds, only to start moving again

First choose the frame—it must be sharp—where the action is to "freeze" If the scene is to open with a "freeze," this would be the first frame It is then copied on the same type of film as the original, following the technique outlined previously Make certain that the framing is exactly along the edges of the original frame to prevent displacement of the subject. The new "freeze" scene is then spliced-in at the proper place

Masking scenes with the matte box: The effect of viewing through a pair of binoculars, a keyhole or porthole is easily and accurately produced with the matte box.

Since the outline of the mask in this effect should be slightly out of focus, the distance between the film plane and mask, and also the lens opening and focus settings must be carefully selected. No exposure compensation is necessary when shooting through a mask Exposure should be based solely on the brightness of the background scene

The traveling mask: To produce the effect of the camera moving through a keyhole or other mask move the mask toward or away from the taking lens while filming

Silhouettes: Some interesting effects can be obtained by shooting through silhouettes showing the outline of a window, doorway, gate, a rail fence, etc The desired silhouette is cut out of a black paper or cardboard and mounted in the matte box frame, with the background scene visible behind it. In some cases it is best to have the silhouette in sharp focus, in others it may look more natural slightly out of focus.

The matte box for wipes Wipes are created by moving a masking device across the front frame of the matte box at the beginning or at the end of a scene The outline of the mask must be reasonably sharp. The wipe mask can be in many shapes and can move in any direction, vertically or horizontally For a diagonal wipe, the edge of the mask is simply cut diagonally to the matte box frame. Wipes should be rather quick and should never last more than two seconds. The movement must be as smooth as possible It is always preferable to have the wipe move in the direction of the action If, for instance, in a basketball game scene the action moves from left to right, the wipe should also move from left to right

Whenever a scene ends with a wipe, the next scene should open with a wipe, or a fade in If a wipe, it does not have to be the same shape or move in the same direction as the closing wipe.

Double wipes. Instead of using one masking device for a wipe two may be used moving from opposite directions and wiping out (or wiping in) the image toward the center. This effect is especially effective with the mask edge cut diagonally to diamond shape or to a zigzag edge. Double wipes are most appropriate with scenes having their main subjects in the center of the frame.

Effect of opening or closing center: A transition often found in professional films is the circle or square which opens or closes a scene, an effect readily obtainable with the matte box (see illustration). Two masks mounted in the front frame are equipped with a triangular cutout (angle of cutout about 60°). They are then moved towards or away from each other, depending on whether an opening or closing effect is desired This transition is also most effective with scenes having subjects in the center of the frame

Superimposed wipes: The most professional-looking wipe effect is a double exposure of two connecting scenes The technique is similar to making a lap-dissolve—it calls for a double-exposure of the wipe out and wipe-in The new scene actually wipes out the first one, creating an extremely striking effect.

The first scene is wiped out by means of a black mask as described previously The film is now rewound

to the beginning of the wipe out. The new scene is opened with a wipe-in moving in the same direction as the wipe-out. It is most important that the speed of the new wipe in correspond to the speed of the wipe-out. Otherwise the dividing line between the two scenes will be objectionably noticeable. Throughout the wipe, the new scene should cover exactly the area wiped off the previous scene, not more, not less. With a little practice this can be done with perfection.

The matte box for split-frame scenes. The most familiar type of split frame scene pictures a person sharing a scene with himself. To obtain this effect, right and left halves of the picture are filmed separately with one half always masked off. The mask must be several inches in front of the lens to appear slightly out of focus. It is not mandatory that exactly half the frame be masked off. The masking can be done anywhere within a scene; vertical or diagonal splits are possible and a scene can be split more than twice. For instance, it is possible to combine four different sports in one scene, each covering ¼ of the area, as frequently done in some newsreel openings.

Split-frame filming is designed not only for comedy or mystery purposes, it has many applications in industrial and other professional filming. One can show a new and old building or piece of machinery simultaneously on the screen. In a sales promotion film or a television commercial one can show the old and new method of performing a task, or the advantages of one product over another, side by side on the screen. A chart showing sales or production figures can occupy half of a frame while the president of a company delivers his message on the other half, a title can cover part of the frame, a regular scene the remainder.

Special split-frame effects. Some of the most striking split-frame effects seen in professional films, and usually produced in the laboratory, can be made with the matte box. For instance you can shoot a scene in which your own movie is shown on television.

The scene is the interior of a room with a TV set facing the camera. The picture on the television tube is to show your own film, your children or pets playing on your home-produced dramatic show. It is only necessary to shoot this indoor scene with the television screen masked off, cap the lens and wind back the film, then superimpose over it the scene to be seen on television with everything but the TV screen area masked off. In a similar fashion, action can be shown on a projection screen.

The matte box for titling. The Bolex Matte Box can also serve as a compact, portable titler, especially valuable for superimposing a black title over a live action scene. The title cell can be made in a number of ways: it can be painted, drawn or hot pressed on a sheet of clear acetate, or titling letters can be mounted on the acetate or the glass plate.

The matte box for superimposed animation. The matte box permits combining animation with live action scenes, an almost untouched field with limitless possibilities in all types of motion pictures. Here are some simple examples: A painted arrow can be superimposed over a live action scene, pointing out an important area on a machine, in a medical specimen, in an aerial view, in a motion study sequence. Charts or figures can be superimposed over the actual scene.

The matte box for creative experiments. The matte box can be used to hold all types of other things in front of the taking lens, producing an almost unlimited variety of effects.

A glass plate can be partly or completely covered with a coating of vaseline or lipstick to add an element of mystery to a scene, or to produce an out-of-focus effect at the end or beginning of a scene. Scenes can be filmed through all types of glasses or plastic materials to produce deliberate distortions or through sheets of colored gelatin. Effects that, up to now, have never been possible to produce in a practical manner on the original film can now be made easily by using a matte box in combination with today's versatile 16mm cameras. ■

A booklet describing in full detail how each of these matte box effects are made is available free from Paillard, Inc., 100 Sixth Avenue, New York 13, N. Y.—Editor

WHEN CHANGING YOUR ADDRESS

Please notify us at least four weeks in advance. BE SURE to give your Former address as well as your New Address. Our Circulation Department needs both addresses in order to properly identify your address stencil.

Your cooperation will insure that American Cinematographer will continue coming to you regularly without delay or omission of issues. Thank you.

American Cinematographer

SALUTE TO 35 HISTORIC YEARS of the Visual Artistry of Academy Award Winning Directors of Photography

Since the presentation of the first Academy Award for the Best Film of 1927 35 dramatic years have marked the significant contributions of the artistry of the Director of Photography to these distinguished films. Mitchell Camera Corporation is proud that 97% of all "Oscar" winning Best Feature Films have been produced with Mitchell equipment. We express our thanks to the Director of Photography for his lasting loyalty and confidence in Mitchell.

To the Academy of Motion Picture Arts and Sciences we extend our appreciation for their dedicated work to give all people, the world over, an awareness of the great talents, efforts and achievements of the people of the motion picture industry.

MITCHELL
CAMERA CORPORATION
666 W. HARVARD STREET • GLENDALE, CALIF.

NOW REPRESENTED IN OVER 45 COUNTRIES THROUGHOUT THE WORLD. AGENTS NAMES AVAILABLE ON REQUEST

THE LAB FOR REVERSAL FILM

16MM

BLACK & WHITE
REVERSAL
PRINTING
&
PROCESSING
&
COLOR PRINTING

OTHER SERVICES

- Work Prints
- Color-to-Color Prints
- Color-to B & W Prints
- Raw Stock
- Ultrasonic Film Cleaner
- A & B Roll Prints
- Fades-Dissolves
- Timed Prints
- Edge Numbering

FOR COMPLETE INFORMATION WRITE

LAB-TV

723 Seventh Ave., New York 19, N Y. • JU 6-2293

PRODUCERS SERVICE HOUSE

Continued from Page 277

pleasing result. This project worked out very well and today the sequence is being used in an Army training film.

In many cases, the producer comes to the service house for advice before he shoots a TV commercial requiring special treatment. This often saves him time and expense in his work because he then understands how the desired effects can be attained. A good example of this involved a film made for Eastman Kodak Company where the producer wanted a ghost shown throughout the production, darting in and out of scenes in order to point out safety hazards and methods of correction.

The Eastman film was in color but the producer wanted a white ghost. The service house recommended shooting the ghost against a dark background on black-and-white film. When this was done, the color film and ghost film were delivered to the service house. Here, the job required superimposing the ghost over the color scenes, at the same time maintaining a constant degree of transparency for the ghost.

In order to maintain the position of the ghost in some scenes where the registration with the background scenes was critical, both conventional and aerial image projectors were employed on the printer. In this manner, both films were projected, positioned and photographed simultaneously. In addition to repositioning many of the scenes to make the ghost fit properly, it was necessary to make a series of exposure tests in order to retain the desired ghost effect throughout the presentation.

Another recent project required a glass of beer to be superimposed over a live background scene. The producer wanted the scene to show through the clear beer but not through the foam and not through the stem of the goblet. This was accomplished by using color separations from a color negative to make mattes of the beer, then running the various elements through the printer. This allowed careful control over the degree of exposure and provided the desired effect. The background scene was clearly visible through the beer and at the same time, the beverage appeared live and appetizing. Fig. 2 shows the three scene components: the outdoor scene, the glass of beer, and the beer superimposed over the outdoor scene.

Frequently, a producer wants an effect where people or objects must be shown in a size that is out of proportion with respect to surrounding props or scenery. In such scenes, closeup films are made of normal size objects. Mattes are prepared and one film is blown up when it is projected on the printer to create the giant and midget effect. Some startling results are possible with this technique. One recent job involved a tiny Peter Pan alongside a mammoth jar of peanut butter, as shown in Fig. 4. Here, Peter Pan is actually a live person who moves around the jar and looks at it longingly.

Occasionally, a producer comes to the service house with nothing more than an idea or a title and he wants creative help in developing this spark into the final product. A recent case of this kind dealt with the title scene for the feature movie "The Sky Above and The Mud Below." The project involved artwork, design and photography. This job, shot on the animation stand, showed a cannibal's spear and other unique animated effects that added a great deal of interest to the title scene.

The background was stylized as a drawing to represent jungle surroundings in New Guinea where the live action takes place. Ideally demonstrating the current demands that must be met by the service house today, this project utilized the complete facilities of the art department. It developed the concept, conferred with the producers until plans were approved, then finalized the drawings.

Lettering was prepared, overlay cels were made for moving objects, then

FOR MORE INFORMATION

about the shoulder supported cameras and shoulder supports for 16mm cameras pictured on pages 284 and 285, write to the following

PANAFLEX 65 — Panavision, Inc. 1917 Pontius, Los Angeles 25, Calif.

ECLAIR 16MM REFLEX—Eclair International Diffusion, 12 Rue Gaillon, Paris, France

MITCHELL MARK II REFLEX—Mitchell Camera Corp., 666 West Harvard, Glendale, Calif.

PRENZEL SHOULDER-POD — Distributed in U.S. by Cine 60, 630 Ninth Avenue, New York 36, N.Y. also Florman & Babb, Inc., 68 W. 45th St., New York

S.O.S. BODY BRACE — U.S. distributor is S.O.S. Photo Cine Optics, Inc., 602 West 52nd St., New York 19, N.Y.

animation was accomplished by panning in certain objects and by moving the camera to get transition effects between titles. A great deal of work can go into a title, it can take hours or weeks to create the wanted results. The job depends on the amount of artwork required and on the complexity of the shooting.

The producers service house is frequently called upon to prepare maps for documentary shows such as CBS's "Twentieth Century" and NBC's "Project Twenty." The type of scene is often used to deal with troop movements, to illustrate a threat created by political situations, or to show the relationships between the two countries. In such cases, movement is represented by a moving line or by shaded areas. The work is performed on an Oxberry animation stand where lines or shaded areas on cels are superimposed and moved over the map background. Sometimes the effect is accomplished by scratching off lines and shooting the process in reverse, or by actually panning a cel or line.

From the problems described above, the reader can readily get the answer to the question "Why Is the Producers Service Business Booming?". The hard-pressed producer is in no position to maintain the staff of experts and the costly machines that are needed for today's jobs. Most important, he must hold his expense to a minimum to meet competition. He is able to do this by enlisting the aid of the producers service house to execute the intricate and complex visual effects increasingly called for today in the scripts for TV commercials, industrial and other films. Here, high volume production and modern equipment provide superior results at the lowest possible cost. ■

Our service →

PHOTOGRAPHING FILMS FOR TELEVISION

Continued from Page 280

lighting on sets for any of the TV shows I have photographed.

Personally, I dislike flat lighting and I avoid using units such as cone lights from the floor, although I have on occasion used them for fill light. But I prefer more directional light, cross lighting, more contrast—lighting with lots of guts.

When you photograph films for television you have to be more careful in delineating action against backgrounds because the ultimate picture, as seen on home receivers, is small. A dark figure against a dark background on a TV screen is difficult to see. So a bit of edge or kicker light on the figure will at least suggest his presence in such a scene, even when TV reception is bad.

Ted McCord's photography of the feature, "Two For The Seesaw," is a fine example of light artistically and realistically used. No unnecessary or un-motivated lighting was employed anywhere. Where there was no call for it, McCord avoided use of back light and sometimes fill light. The same principal is valid for TV film lighting; however, one may have to use a little more separation, fill or accent light than might be used in shooting the same scene for theatre screens in order to compensate for the loss of detail inherent in TV transmission.

I am categorically opposed to using obviously un-motivated lighting. If, in a scene, a player is standing in shadow, as when under some overhanging shelf or ledge, for example, I won't worry too much about separation except that which I can control in the background in a natural way.

***Q*—To summarize, then, would you say that certain limiting factors of the television medium and especially of the small screens of home TV receivers more or less dictate the lighting techniques employed today by cameramen who photograph television films?**

A—Yes. ■

DID YOU KNOW . .

. . that virtually all photosensitive materials deteriorate with age. There may be a loss in sensitivity, a loss in contrast, or a growth in fog level, or all three?

. . that the exposure produced on a photographic material depends on the quality and amount of light falling upon it and the time during which it acts?

. . that granularity in a film increases with the density of the negative, hence it is important to avoid overexposure?

Our service is better than ever now that our new plant is in operation

Capital

FILM LABORATORIES, INC.

470 E St, S W • Washington 24, D.C. • District 7-1717

SOUND, EDITORIAL AND ALL MOTION PICTURE LABORATORY SERVICES

CAMERA DOLLY

Continued from Page 287

the same as wedges are driven for the same purpose under the timbers of conventional dolly tracks laid on the ground. The two tracks or rails are then laid on the platforms of the tripods and secured by bolts and wing-nuts. The rail sections are in short lengths to facilitate erection of the track to any suitable length.

The tripods, rails and the camera "car" all are made of lightweight aluminum. Grooved plastic rollers serve as wheels. We found that plastic wheels provided a softer and therefore quieter run on the tracks than metal ones. We also learned that wheels should not be too small in diameter, smaller wheels create more vibration which seriously affect camera steadiness. The larger the wheels, the better, but this is a factor which depends upon one's need for compactness of the equipment.

When erecting the dolly tracks on uneven ground, there is never the need to move a single grain of sand or to smooth the surface with a shovel; the adjustable tripods take care of deviations in the ground surface as already stated. The only time there is any digging to do is when the tracks are used in wilderness brush areas, where a path for the camera operator must be cleared alongside the tracks so that he can walk along with the camera during the making of a tracking shot.

This "pocket-size" dolly and track equipment was specifically designed for use with cameras such as the 35mm Arriflex and 16mm cameras of similar weight and size. For heavier cameras, such as a Mitchell BNC, it would be necessary to use more sturdy and heavier construction in both the tracks and the dolly itself.

EDITOR'S NOTE: Tracks and dolly similar to the author's were used by cinematographer Joseph Brun, ASC, the early part of 1962, while producing and photographing the feature film "Elodia" in Puerto Rico—an experience he described in an article in the September, 1962, issue of *American Cinematographer*, on page 540. The equipment was pictured in one of the illustrations and is reproduced in this issue, on page 287.

We queried Ozols about this equipment, asking if he designed it. "The tracks and dolly pictured in Joseph

Brun's article," he replied, "were not designed nor constructed by me. As a matter of fact, my equipment was not built in Puerto Rico but right here in Venezuela. The equipment shown in the Joseph Brun photo is much heavier than mine and obviously constructed to support a much heavier camera, such as the Mitchell.

"As to the origin of the tracks used by Brun, I offer the following: while working in Puerto Rico about two years ago, I encountered Jim Sheldon, an American and at that time the only professional motion picture prop man in Puerto Rico. He was also an excellent carpenter, capable electrician and all around handyman. He was free lancing—if such can be said about his profession—working for small local film producers and foreign motion picture companies shooting on location in P.R. He was wonderfully inventive, an ideal trait for a prop man. He built a small sound stage for Delta Films and designed and built sets for Vigue Films—both local companies.

"We got together one day over glasses of La India beer, a local product, and together we discussed a possible solution for a mutual problem—the great need for and the lack of suitable camera dollies and tracks for Puerto Rico film production. The elevated 'pocket-size' dolly and-tracks idea was kicked about as a possibility. I saw no more of Jim Sheldon after that pleasant visit and shortly thereafter, returned to Venezula.

"It is likely, however, that both of us again gave some thought to the idea we discussed, with the result we did something about it when the need for dolly and tracks again arose. One reason I believe the equipment used by Brun was made by Jim Sheldon is that it appears to be ruggedly built to accommodate the heavy motion picture production cameras which European and American film companies bring to Puerto Rico when on location there. Moreover, it is hard to believe that there is any other person in Puerto Rico capable of designing and building such equipment.

"And besides, there was the discussion we had about a 'pocket size' dolly that day over a glass of beer." e

---

Motion picture film swells during processing, shrinks during drying, and continuous to shrink at a decreasing rate throughout its life.

WIDE FLOOD or MEDIUM FLOOD
with only one housing, fingertip controlled!

The new, versatile, 2-WAY
QUARTZ-KING 'DUAL'

Quartz-iodine lamps will not dim; reflectors will not tarnish. Units operate from 110-120 volts A.C. or D.C. with CONSTANT COLOR TEMPERATURES.

DUAL-650
(650 watts 5.4 amps)
220 foot-candles, Wide Flood
390 foot-candles, Medium Flood
(measured at 10 ft.)
More than 2000 watts of studio light!

DUAL-1000
(1000 watts 8.3 amps)
400 foot-candles, Wide Flood
850 foot-candles, Medium Flood
(measured at 10 ft.)
More than [illegible] watts of studio light!

Code 213, Victoria 9-5991
ColorTran INDUSTRIES
630 South Flower Street
Burbank California

PRICED TO SELL!

P T 900 Presto professional tape recorder with Rangertone sync. Two-case model, all in like new condition, $450

Auricon Pro 200 camera with conversion to Mitchell-type magazines; amplifier, mike, all cables and cases, all like new, $775

Two Fairchild disc recorders as a unit, amplifier with all controls including vacuum thread control. A complete recording set-up in every way, all equipment in best of condition $1075

Your correspondence invited on these or other equipment which may be for sale

ERNEST M. REYNOLDS
105 East 191st Street, Cleveland 19, Ohio

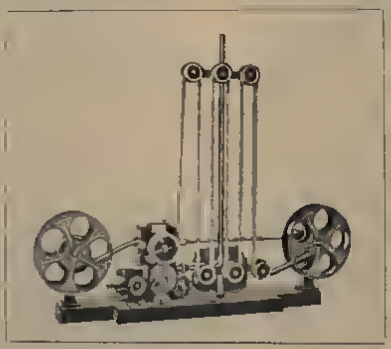
LINWOOD DUNN, ASC
Formerly head of RKO Studios Effects Dept.
CREATIVE SPECIAL EFFECTS
Complete Advisory and Technical Services From Story Ideas to Theater Screen
FULLY EQUIPPED LABORATORY AND STAGE FOR SPECIALIZED EFFECTS SERVICES IN 16-35-65mm
Equipment Design • New Processes
Over 30 Years of Major Studio Experience
FILM EFFECTS of Hollywood
1153 N. Highland Ave., Hollywood 38, Calif.
Phone HO 9-5838 Cable FILMEFX

One-Two-Three

AND

FILM EDGE NUMBERS ARE EASY TO SEE

• Write for brochure



This ADVANCED Moy Visible Film Edge Numbering Machine simplifies matching 16mm to 35mm with direct numerical reference between both sizes.....**$3750**

STANDARD MODELS: Designed to edge number every foot of 16mm 17½mm, 35mm films and simplify the task of checking titles and footage. MOY EDGE NUMBERING replaces cue marks, perforations, messy crayons, punches and embossing—does not mutilate film. Both negative and positive films can be numbered. Non magnetic paris do not effect magnetic film $2395

SPECIAL 16/35/70mm Combination $4475

CONVERSION KITS For changing operation from 16mm to 35mm or 35mm to 16mm $875

S.O.S. PHOTO-CINE-OPTICS, Inc. 602 West 52nd St., New York 19—PLaza 7-0440
Western Branch 6331 Hollywood Blvd. Hollywood Calif.

SEE OTHER S.O.S. OFFERINGS ON PAGES 273, 302, 306 AND 309

MAKE YOUR OWN NICKEL CADMIUM BATTERIES FOR ARRIFLEX

F & B PROVIDES COMPLETE DO-IT-YOURSELF KITS

10 VOLT Eight 1¼ Volt Nickel Cadmium Cells. All Wire Cell Straps, Benene Jacks and Hardware plus Leather Case and Instruction Sheet **$49.50**

Assembled $79.50

15 VOLT Twelve 1¼ Volt Nickel Cadmium Cells. All Wire Cell Straps, Benena Jacks, and Hardware plus Leather Case and Instruction Sheet **$74.50**

Assembled $100.00

Serving the World's Finest Film Makers

FLORMAN & BABB, INC.

68 West 45th Street
New York 36, N. Y. MU 2-2928

specialized

LIGHTING EQUIPMENT

for

MOTION PICTURE, STILL

and

TELEVISION STUDIOS

Write on Your Letterhead

for A Copy of Our Catalog J

Mole-Richardson Co.

937 NORTH SYCAMORE AVENUE
HOLLYWOOD 38 CALIF.

"THE BALCONY"

Continued from Page 275

authority figures they represent and enjoying the adulation of the populace—so much so, in fact, that they decide to hold onto their assumed authority. They are promptly nullified by the Chief of Police who reminds them that he still controls the real power, that of force. In the final sequence, however, the Chief and the erstwhile leader of the rebels are gauged up on by the "ladies" of the establishment in a scene reminiscent of the climactic melee in "Suddenly Last Summer." Stripped of their fancy uniforms and shorn of their protective phychological facades the two former "tigers" are turned out to skulk ignominiously through the streets of the city. The unperturbed Miss Winters then turns to the audience and advises the viewers to go to their own homes and beds where everything will be even phoner than it appeared to be in the film.

If the plot seems confused, the satire is not. It is a brilliantly abrasive, sometimes funny, sometimes shocking roar of protest against the false aspects of modern life. Sensibly, the producers of the film have cut through the nebulous symbolism of the play to expose the raw meat of the theme, and Director of Photography Folsey has managed to create a visual aura of almost-real fantasy without resorting to photographic gimmicks or arty optical effects. His photography in black-and-white and 185-to-1 aspect ratio is smooth and rich in the highest professional style—quite unlike the poor photography that marks so many art films.

Since the picture was conceived as an attempt to view the whole world as a thing of illusion, a motion picture sound stage was logically selected as the ultimate place of the illusion. Visually there was an effort to get onto the film a feeling of the essential sleaziness characteristic of the enormous backlot construction of major studios—emphasizing that kind of cheap-beautiful texture that seems to say: "This has been an illusion-making device that is now weathered by the storm, but still has a substance of its own."

Inside the stage there are no sets in the conventional sense—only fragments of walls, caverns of darkness, pieces of canvas and pools of light, a mélange of devices completely different from the sets used in an ordinary mo

tion picture. Even the two areas that might conceivably be called sets, in the usual sense, are clearly established as not being that at all. The first, the Winters bed-chamber, is given an illusion of glamour and solidity by "walls" that turn out to be gossamer strands of cloth. The other is the office of the "establishment"—solid looking enough on the inside, but quite obviously formed of backless and topless flats but ted together.

In the establishing shot of the stage, the vast expanse seems to be dotted with tiny sets and pools of light The sets are actually nothing but arrangements of tables, chairs, rugs and pieces of cloth hanging down beside fragmentary walls or flats A stairway, part of the permanent geography of the stage, which leads up to the catwalks around the ceiling, is also used. In material terms there was actually little, but it was made to take form through ingenuity.

Standard tools of picture-making—such as backings, drops, photo-murals and newsreel clips were thrown together in a helter-skelter mosaic designed to say: "Cast aside your ordinary way of looking at things and let go for a bit." This is in key with the underlying idea of the film: that most people go through life playing a kind of charade, acting out roles that others expect of them, whereas what is really valuable is that which each person has as an individual, rather than the facade he assumes in order to conform to accepted standards That idea is expressed in the film by portraying real situations as charades, suggesting that everything in life is a pose, to a certain extent.

Photographically the theme is carried out through the use of simple but effective techniques. For example, in one scene a realistic view of a Cape Cod cottage fills the screen Suddenly a live character, all out of proportion to the cottage, walks in front of it and we realize that we have actually been viewing a huge painted background mural A similar effect is created when another player suddenly overwhelms a panoramic vista of Monument Valley. In another sequence, a judge harangues a sober-faced, attentive jury. Only when the camera cuts to a side angle do we realize that the "jurors" are actually life-size photographic cutouts mounted in a jury box.

Long shots of the "establishment" encompassed the entire sound stage, in

EXCLUSIVE • NEW • EXCLUSIVE • NEW • EXCLUSIVE • NEW • EXCLUSIVE

new, improved
super-efficient
CINE VOICE CONVERSION

Designed and developed by Florman & Babb's Chief Engineer, Ray Emeritz after extensive testing in the field by several of New York's top-notch cam eramen, F & B has finally achieved maximum efficiency and absolutely silent operation in a new 400 ft Cine Voice Conversion

- A true torque motor — Idles at ½ power, when camera is turned on Assumes full power. This system prevents excessive heating
- Torque motor and Veeder counter assembly completely encased in insulated housing for protection from cold, rain, dust, etc.
- Veeder counter effectively silenced
- Torque motor provides sufficient power to take either 400 ft or 1200 ft Mitchell magazines.
- Neon camera running light.

CINE VOICE
CAMERA CONVERSION
Including torque motor and belt $445.00
(price does not include Mitchell magazines)
At present we can promise delivery within 15 days

Accessories Available
Behind the lens filter slot $45.00
Lens Turret Lock for Zoom Lens operation $25.00
NEW ANGENIUX 12mm — 120mm ZOOM LENS "C" MOUNT WITH SIDE VIEW FINDER IN STOCK! $895.00

John Fletcher ABC cameraman with Ray Emeritz F & B's Chief Engineer who developed the new Cine Voice Conversion

Serving the World's Finest Film Makers
FLORMAN & BABB, INC.
68 West 45th St., New York 36, N. Y. MU 2-2928

Automatic Daylight Processing

DEVELOPING TANK
- Processes up to 200 Ft
- 8mm-16mm 35mm-70mm
- Movie—X Ray—Microfilm
- Motor-driven, portable
- Uniform Density Assured
- 400 Ft Tank Available

FILM DRYER
- Motor driven—Heated
- Speedy drying
- Automatic shrinkage allowance
- Stainless steel and aluminum construction
- Easily assembled without tools
- Compact Portable

Guaranteed Write for Free Literature
Micro Record Corp. 487-14 South Ave Beacon N Y

Cleanall
. . . the phantom cleanser
Advertised on radio KFI (NBC) Safe! Contains no acids, caustics, ammonia or hydrocarbons Made with an herb imported from Italy Will positively clean movie equipment, stainless steel porcelain cabinets developing tanks, cutting tables, etc. Excellent hand cleanser
$1.50
Money back Guarantee
CLEANALL
BOX 548, BURBANK CALIFORNIA
Phone: TH 6 6860

QUALITY AND SERVICE

16 MM

BLACK & WHITE

REVERSAL NEGATIVE
POSITIVE PRINTING
AND PROCESSING

COLOR Processing-

COLOR PRINTING

Work prints—Timed prints
Color to Color prints—A & B roll prints
Color to B & W prints—Fades Dissolves
Dupe Negative—Multiple prints
Raw stock—Fastex service
Loop printing

Write for complete information

VIDEO FILM LABORATORIES

350 W 50th ST • NEW YORK 19, N Y.
JUdson 6-7196

CURE
TV
CUT-OFF

Specially designed and manufactured for F & B after careful mathematical computation, these TV cut off mattes are ACCURATE

Simply position one over the ground glass of your Moviola screen and see at a glance how the TV cut off affects your picture.

Fits all Moviolas (except Bullseye models)

ALL SIZES—ONE PRICE

$5.75 3 for $15.95

Please send Moviola ground glass measurements with your order

Serving the World's Finest Film Makers

FLORMAN & BABB, INC.

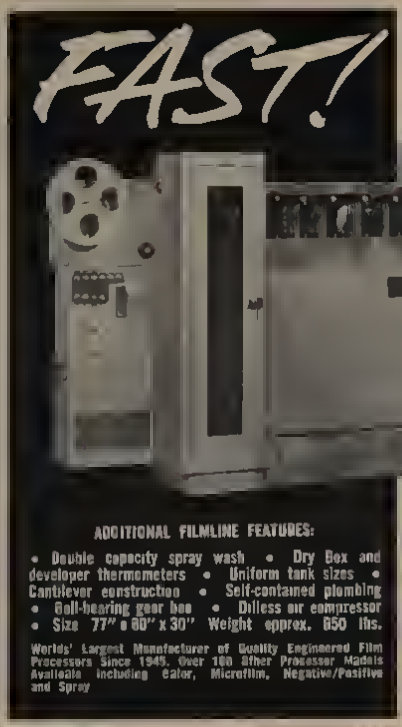
68 West 45th Street
N. Y. 36, N. Y. MU 2-2928

cluding the sound-padded walls. The stage, located at KTTV studios in Hollywood, measured 100 x 65 feet. A problem was to make it appear much larger, as if it extended to infinity. Shooting with an extreme wide-angle lens helped create this illusion, but something more was needed. Folsey conceived the idea of setting a group of studio lights in a perspective line that would stretch the full length of the stage. Instead of using lamps of uniform size, however, he placed the largest lamp closest to the camera and graduated the sizes down to a Dinky-inky at the far end. The lamps were all set on dimmers so that their brightness would balance and the depth of the perspective was thus vastly increased.

In one sequence Folsey was confronted with the challenge of lending visual interest to a long, empty hallway made up of loosely assembled flats and doorways against a backdrop visible above the tops of the flats in the long shot. Having little in the way of props or set decorations to work with, he created a dramatic effect by bringing cross light in through openings and shuttered windows, playing light against shadow. He also beamed shafts of light onto the backing in contrast to the dark edges of the flats, breaking up the solid expanse of wall by working one element against the other and increasing the illusion of depth through the forced perspective of the wide-angle lens. The resultant effect, far from being flat, has depth and texture on a highly dramatic level.

Boldly defying cinematographic canon, Folsey filmed one entire sequence, closeups and all, with an 18mm wide-angle lens. The action, which takes place inside a tent, involved the make-believe cavalry general in a startling dialogue with a ravishing female "horse" equipped with her very own mane and an ersatz tail. The purpose of the unorthodox photographic approach in this sequence was to include as much as possible of the provocative background in each composition, even when the camera moved in for big-head closeups. The inevitable distortion in the closer shots was not regarded as a liability; rather, it was welcomed as subtly intensifying the fantasy of the situation.

In another somewhat revolutionary departure from standard filming technique, the director encouraged the actors to improvise their action rather than follow precisely blocked move-



STILL The World's Most Popular Film Processor!

- Develops reversal film at 1200 ft. per hour
- Negative-positive film at 1200 ft. per hour

NEWEST MODEL R-15 REVERSAL FILM PROCESSOR

- Exclusive Overdrive — eliminates film breakage, automatically compensates for elongation, tank footage stays constant
- Easy-to-operate, fully automatic controls make this an ideal machine for unskilled personnel
- Variable Speed Drive — development times from 1½ to 12 minutes
- Complete Daylight Operation on all emulsions—no darkroom needed
- Feed-in elevator and 1200 foot magazine permits uninterrupted processing cycles
- Stainless steel tanks, air squeegee, recirculation fittings, air agitation tube, lower roller guards
- Forced filtered warm air dryhox

Model R 15 ONLY $4750 Complete* F O B Milford Conn

*Including Temperature Control System, Bottom Drains and Valves, Developer Recirculation and Air Compressor

Lease & Time Payments available

When You Buy Quality – Filmline Costs Less!

For additional information write

Filmline CORPORATION MILFORD, CONNECTICUT

ment, the theory being that they would be able to concentrate on performance instead of being concerned with hitting specific marks. Since follow-focus now became somewhat catch-as-catch-can, Folsey decided to increase depth-of-field by lighting at a key high enough to permit stopping down the lens to f/8. He also switched from DuPont Superior 2 to the somewhat faster Eastman Double X.

He had started out using a Fearless dolly, but soon discovered that this was not nimble enough to hold contact with the freely-improvising actors and that a great deal of time was being lost in re-laying dolly tracks. The problem was solved by substituting a crab dolly capable of swinging easily in any direction to cover unexpected moves. Admitting that such improvisation created problems on the stage and in the cutting room, Director Strick, nevertheless, maintains that the results justify the means: "There are a couple of violent deliberate mis-matches in the picture," he points out. "There is even one in which an actress changes from one costume to another in the midst of a continuous walk—with direct cuts made back and forth to the original

NEW ANGENIEUX 10X ZOOM LENSES

12mm-120mm f2.2 available for all 16mm cameras.

25mm-250mm f3.2 available for all 35mm cameras.

IN STOCK! Available immediately

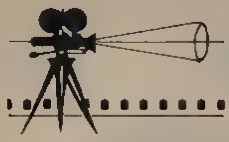
Serving the World's Finest Film Makers

- Lowest Prices!
- Trades Accepted!

WRITE • WIRE • PHONE

FLORMAN & BABB, INC.

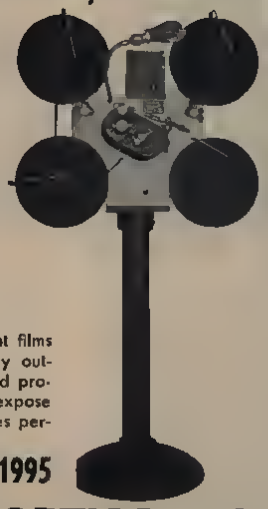
68 West 45th St., New York 36, N. Y. MU 2-2928



Rock-Steady Prints

are YOURS with

TEL-Amatic® PRINTER



Prints color, black-&-white, reversal, sound or silent films with rock-steady professional precision. Has many outstanding features found only in much higher priced professional printers. Sufficient light is provided to expose fine grain film. Semi-automatic light change assures perfect exposures. Write for brochure.

PROFESSIONAL continuous contact sound & picture printer for 16mm or double 8mm films **Only $1995**

S.O.S. PHOTO-CINE-OPTICS, INC.

602 WEST 52nd STREET, NEW YORK 19, N.Y. • Telephone Plaza 7 0440 • Telegram FAX, N Y
WESTERN BRANCH 6331 Hollywood Boulevard, Hollywood 28, California • Telephone 467 2124

SEE OTHER S.O.S. OFFERINGS ON PAGES 273, 298 304 AND 309

SAVE MONEY

When Filming In Europe By Renting Your Camera Equipment From

CHEVEREAU

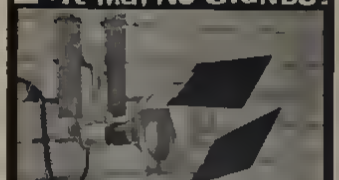
PARIS, FRANCE

We Service The Entire Continent

CAMERAS, including the Mitchell BFC 65mm
CRANES
DOLLIES

20 RUE DE LA CHINE
PARIS 20, FRANCE
Tels: MEN 9472 PYR 0104
Cable Camerafoc Paris

LOOK Ma, No STANDS!



That's right, Lowel-Lights attach virtually everywhere, without stands. Shooting in cramped quarters? Flying to location with minimum equipment? Lowel-Lights will save the day. They tape up on walls with non-marring Gaffer-Tape, clamp onto pipes, furniture, moldings, nail onto objects, balance on level surfaces. Work great on stands, too! Units fit in your pocket, so do the folding Barn-doors which attach instantly — without tools — to all R40 reflector bulbs. Lowel-Light system saves so much set-up time, it pays for itself the first day of location shooting. Fastest, most versatile, most compact incandescent lighting equipment ever designed!

Fibre case 5 x 12 x 4 with 5 Lowel-Lights, Gaffer Tape, space for 5 Barndoors $34 50

Vulcanized fibre case 14"x 22" x 6" with 6 Lowel Lights, 6 Barndoors, 2 P L C stands, 3 25 extensions, Gaffer Tape holders for 6 R40 bulbs $124 50

Single Lowel-Light with porcelain socket, neoprene cord, Gaffer-Tape $6 95

Lowel Light R40 Barndoor $5 75

Gaffer Tape 12 yds $1 95 / 30 yds $3 95

LOWEL LIGHT PHOTO ENGNR., 429 W. 54th ST., N. Y.

scene—and nobody notices it. I feel that too much attention is paid to the matching of backgrounds and action. Granted that this may improve the technical finish of a picture, there is danger of becoming a slave to the script girl, if you are not careful. I feel that if you are really getting something beautiful whether it matches or not is unimportant, and to stop the scene simply because someone has a handkerchief in the wrong hand is nonsense. As long as the dramatic intensity of the scene holds up, no one will notice the mismatch."

One of the most visually effective sequences in the film involved action taking place between two huge opposing mirrors set up directly across from each other, so that a multiplicity of images extended off into infinity. The only practical way to achieve the effect was to shoot through a transparent two-way mirror into the set. By taking a meter reading of the key light normally used to light such a sequence and then taking another reading of the light through the mirror Folsey established the fact that the mirror cut the light down the equivalent of three stops. As a result he established the formula of lighting the set three times "hotter" than normal for the mirror shots and found that they printed the same as, and could be intercut with, scenes shot normally. He gives a great deal of credit for consistency of exposure in the film to use of the new improved Spectra meter developed by Karl Freund, A.S.C., maintaining that "I have found no other meter that does the job so well."

George Folsey, a cameraman pioneer in Hollywood, was for many years one of M-G-M's top cinematographers, filming such outstanding pictures as, "The Ziegfield Follies," "Meet Me in St. Louis," "Green Dolphin Street," "Executive Suite," "Forbidden Planet," and "Seven Brides for Seven Brothers." Of his recent experience in photographing "The Balcony" he says: "I have been a cameraman for forty three years and I can't think of another picture that I've enjoyed more, had less trouble with and more satisfaction in doing." ■

Use of Pola-Screen

The use of a Kodak Pola-Screen for controlling brightness of the sky has a number of advantages over the use of color filters. The color rendering of foreground objects is not altered and the effect produced by the filter is easily determined by viewing through it.

"INTERNATIONAL SHOWTIME"

Continued from Page 288

time's" executive producers and packagers, Lawrence White and Joseph Cates, found the mobility of 16mm equipment enabled the crew to get shots that would otherwise have been impractical to schedule. One of these was a high wire act that was filmed with the camera high, near the top of the circus tent.

The first complete color film show of "International Showtime" evolved from NBC's decision to do a "color week" in October, 1962. Up to then, the show had been taped in black-and-white. At the time there were no color taping facilities where the show was being shot.

Originally it was intended that the show be shot in 35mm color, but in a virtual last minute switch in plans the producers decided to use 16mm color and the Synchro-16 technique.

A show in Ravenna, Italy, was the first recorded in 16mm color. Though previous shows were recorded on tape and the news film crew doing the photography had little knowledge of "International Showtime" production techniques, some remarkable photography resulted from their initial efforts.

Using lighter and more mobile 16mm equipment the crew was able to move around the circus grounds for interesting shots as the tents were erected. Overlayed with titles, these scenes introduced the show.

"The color made it just as exciting as real-life," Grant said. "And there were some locations where a live TV camera couldn't go, but were accessible to the 16mm film camera," he added.

The one-hour Ravenna show took three days to shoot, and 12 days of editing, cutting, mixing and production of answer prints. With more experience, the 12 days of editing probably could have been cut to four.

However, from what the producers learned in Italy, later they were able to shoot five one-hour Japanese shows in eight shooting days. (A one-hour Hollywood-produced dramatic TV show, like "Bonanza" and "Empire," takes five to six days to film.) Director of Photography Joseph Brun, ASC, was accompanied by a crew of three from the United States. The balance of the film crew was Japanese. Brun's color photography brought new visual excitement to "International Showtime" on the February 1 broadcast of the

EXCLUSIVE • NEW • EXCLUSIVE • NEW • EXCLUSIVE

WHAT'S A MINI MONITOR?

IT LOOKS LIKE THIS:

Height—2¾ inches
Width—4¼ inches
Depth—3¾ inches
Weight—11 oz.

Price
$49.50

IS IT A...

- playback monitor for tape recorders (Stellavox, etc.)
- sound reader, used with synchronizer
- extra booth speaker
- field amplifier
- field sound reader
- sound editing monitor
- sound reader for 8mm magnetic
- public address amplifier
- field p.a. amplifier
- phono amplifier, hi & lo impedence
- remote speaker system
- amplifier to drive auxiliary 8" speaker
- CONVERTS YOUR OPTICAL ONLY MOVIOLA TO OPTICAL MAGNETIC IN 30 SECONDS

THE ANSWER IS YES!

And it has dozens of other uses, too!

F & E MINI MONITOR. A miniature, transistorized battery powered (standard 9 volt transistor radio battery) magnetic sound reader complete with amplifier and speaker. A compact unit which will be the handiest gadget in the sound room, the editing room, projection booth, or on location.

Synchronizer Bracket & Magnetic Head Connector Cable $6.95
Moviola Magnetic Head & Bracket $25.00

Designed and Manufactured by

FLORMAN & BABB, INC.

Serving the World's Finest Film Makers

68 West 45th St., New York 36, N. Y. • MU 2-2928

EXCLUSIVE • NEW • EXCLUSIVE • NEW • EXCLUSIVE

FOR THE ANSWER to your photographic problems, refer with confidence to the new
AMERICAN CINEMATOGRAPHER MANUAL
More than 400 pages of concise, practical and informative data and charts invaluable to every motion picture cameraman $7.50
AMERICAN CINEMATOGRAPHER MANUAL, P.O. Box 2230, Hollywood 26, California.

TITLES • SPECIAL EFFECTS

Hay Mercer & Co.
4141 NORMAL AVE. HOLLYWOOD 5, CALIF.
NORMANDY 3-9331

CAMART PRODUCTS

OPTICAL FX UNIT AND PRISMS

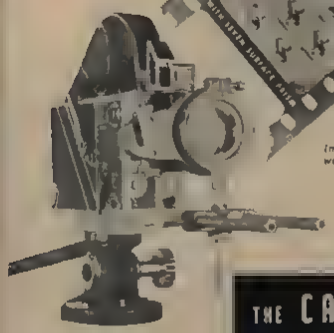
You've got to see it to believe it!

FOR 16mm—35mm—TV CAMERAS, LIVE TV, ANIMATION, MOTION PICTURES

From two to seven images or combinations, more than 27 variations in optical effects, montages, and distortions without expensive opticals

Images may be photographed in still motion or forward and reverse rotation.

Complete unit consists of a four surface prism, mount, revolving housing, and camera base assembly

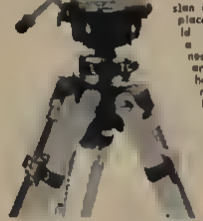


Literature on request

THE CAMERA • MART INC.
1845 BROADWAY at 60th ST
NEW YORK 23, N Y
Phone: PLaza 7-6977
Cable Address CAMERAMART

SMOOOOOOOTH

That's the word for Miller Fluid Action Tripod Heads It's because Miller Heads are true fluid Heads—the load rides on the fluid and all tension adjustments take place within the fluid chambers giving a velvety smoothness unmatched by any other tripod head — there is no slack, no bounce, no backlash no ladder Miller Fluid Action Heads are available in two sizes — The Professional for cameras of 25-35 lbs The Model D for cameras of 12 14 lbs



Miller Model "D" Fluid Head with Ball Leveling Top Miller Grooved Leg Tripod
"D" Head $150 00
B/L Tripod 139 50
Total $289 50
Miller Professional Model Fluid Head with Ball Leveling Top, Miller Grooved Leg Tripod
Ball leveling Pro Head $297 50
Tripod 154 50
Total $451 00

For the finest possible combination get the new Miller Grooved Leg Tripod with Ball Leveling Top These are the easiest and fastest leveling legs available coupled with the finest and most rigid tripods in the Junior class

At your dealer or order directly from

MILLER PROFESSIONAL EQUIPMENT
1619 No Cherokee
Hollywood 28, Calif.
Phone
HO 7-8189

show In addition to filming a high trapeze act from above, with a hand-held camera, he captured a highly dramatic low-angle shot of one trapeze artist as he fell into the safety net Unusual audience reaction shots further heightened the presentation

Each segment of "International Showtime" occupies an hour of TV air time, minus time for commercials, and while each show may take no more than two days to shoot, the pre-production planning may take months Foreign circuses, particularly European, live a gypsy-like existence and move about the countryside playing one day stands This requires producers White and Cates to scout each show thoroughly, timing the various acts and analyzing them for any unusual camera coverage they afford. Even the circus tents—their size, color, etc —are considered for whatever pictorial interest they may present for color photography. In the case of the Ravenna show, one of the reasons it was chosen for the first "International Showtime" show to be photographed in color was that the tent interior was a pleasing blue color, which NBC's color consultants deemed to be the most compatible as a background against which to photograph the various acts.

Once a show is chosen as a subject for "International Showtime," it is contracted for then kept under surveillance until the camera equipment is moved in

Meantime, the producers are ever vigilant that none of the acts are changed in any way or that the timing has been varied Sometimes, this is difficult. Once, a show, which was signed, ran two hours and 15 minutes, Before it was finally taped, the show length varied from two hours to two hours and 45 minutes. Pre-production preparation also includes planning of camera angles; what lenses to use, where to spot the lighting; and how to erect the scaffolding to hold the equipment Finally, the shows are filmed in their entirety in a single run through, act-by-act, before a tent audience

In producing a show of this type for television, mobility of camera and crew outside the tent is almost as important as during the show itself With filming, as compared with video-taping, all necessary camera equipment exclusive of lights can be transported in a large steamer trunk

All the circus shows for "International Showtime" were photographed with Eastman Ektachrome Commercial film, Type 7255, in the camera. Prints for presentation in the United States were made on Eastman Color Reversal Print Film, Type 5269. For color television, the producers aver, Type 7255 16mm color film in the camera gives excellent results

All of the "Showtime" shows shot in color were edited abroad This was an unusually laborious job considering that the editors had three batches of film from three cameras shooting

QUESTIONS INVITED

Need professional advice on a picture-making problem, about equipment, film or cinematography? Reader's questions are invited and will be answered by mail when accompanied by a stamped, addressed envelope for reply. Questions and answers considered of general interest to other readers will be published.

Address your questions to the "Question & Answer Editor," American Cinematographer, P.O Box 2230, Hollywood 28, Calif

simultaneously to work with Despite the abundance of footage, it provided flexibility in editing never before available to the "Showtime" staff. With ample coverage from three different angles, some highly dramatic and exciting moments were cut and edited for each show.

Despite the success had in shooting the initial group of color shows in 16mm Ektachrome Commercial, the producers have no illusion that 16mm color film will replace 35mm color. "But it has its place in certain programming situations," they point out.

Predicting a bright future for their type of TV show, the producers declare there is a greater demand today for actuality than for many studio-produced shows. "And when you do these shows in 16mm color," they add, "you can get so very much with so little equipment. We wouldn't hesitate to go anywhere or to shoot any kind of a show for television in 16mm color."

BEHIND THE CAMERAS

Continued from Page 264

INDEPENDENT

WILLIAM MELLOR, ASC, LOYAL GRIGGS, ASC, "The Greatest Story Ever Told" (Geo Stevens Prod., UA release, P'Vision & Cinerama in Technicolor) with Max Von Sydow and Charlton Heston George Stevens, producer-director

CONRAD HALL, "Stoney Burke"* (Daystar).

JOE MACDONALD, ASC, "Kings of the Sun" (Mirisch Prod., UA release; P'Vision & DeLuxe color, shooting in Mexico) with Yul Brynner and George Chakiris. J. Lee Thompson, director.

ROBERT KRASKER, "The Fall of the Roman Empire" (Samuel Bronston Prod., Ultra P'Vision & Technicolor; shooting in Spain) with Sophia Loren and Stephen Boyd Anthony Mann, director

ERNEST LASZLO, ASC, "Norman Vincent Peale Story" (Fred Ross Prods.) with Don Murray and Dian Hyland Denis Sanders, director

JOSEPH V MASCELLI, "The Incredibly Strange Creature, or Why I Stopped Living and Became a Mixed up Zombie" (Morgan Steckler Prods, Eastman color) with Cash Flagg and Carolyn Brandt Ray Dennis Steckler, director

MEREDITH NICHOLSON, "Man in the Water" (Key West Films, shooting in Florida Keys) with Mark Stevens and Jack Doner Mark Stevens, director

TED MOORE, "From Russia, With Love" (Eon Prods, shooting in London) with Sean Connery and Pedro Armendariz Terence Young, director.

LINWOOD DUNN, ASC, "The Long Corridor" (Leon Fromkess Prod.) Special Effects.

LINWOOD DUNN, ASC, JAMES GORDON, ASC, "It's A Mad Mad, Mad, Mad, World" (Stanley Kramer U.A.) Special Effects

Midwest
MITCHELL
SALES & SERVICE

Mitchell 35mm BNC • 35mm NC •
35mm HiSpeed • 35mm MARK II reflex • 16mm Mitchells • Blimps

RENTALS & SERVICE

Mitchell • Arriflex • Bell & Howell • Others
Gear Heads • Fluid Heads • Zoom Lenses • Other Accessories

ALL RENTAL EQUIPMENT IS WHOLLY OWNED AND MAINTAINED IN OUR SHOP. All equipment is pre-tested under use-conditions before release from our stock.

VICTOR DUNCAN AND COMPANY

250 Piquette Ave.
Detroit 2, Michigan
TRinity 2-7229

Write for our Equipment Rental Price List

Used World-Wide By Discriminating Cameramen

CINEKAD SYNCHRONOUS MOTOR DRIVE—For 16mm Projectors

One-year Guarantee! Immediate Delivery!

Especially designed to drive all Bell & Howell, Jan, Ampro, Kodak, RCA, and Victor 16mm projectors at synchronous speed.

Projector can be instantly attached to Synchronous Motor Drive and quickly detached at any time in a matter of seconds. An outstanding feature is the flexible shaft which connects motor with projector and permits smooth, quiet and steady operation. No special technical knowledge required for installation and mounting. Write for more details and prices

CINEKAD ENGINEERING COMPANY, 763 10th Ave., N.Y., NY, Plaza 7-3511

S.O.S.

IN ONE PORTABLE CASE

Complete SOUND SYSTEM

16MM MAGNASYNC RECORDER

MODEL X-400 TYPE 15 has everything in one case—playback amplifier, monitor loudspeaker, recorder, footage counter, rewind, torque motor—an ALL-IN-ONE monophonic sound system (S.M.P.T.E. standard performance) Accommodates standard 1200-foot film reels

Write for brochure ONLY $1385

Model X-400 for extra lightweight portability, from $1190

S.O.S. carries the complete line of Magnasync recording systems

S. O. S. PHOTO-CINE-OPTICS, INC.

602 WEST 52ND ST., NEW YORK 19, N. Y. • Phone Plaza 7-0440 • Telegram "FAX, NY"

WESTERN BRANCH. 6331 Hollywood Boulevard, Hollywood 28, California • Phone 467-2174

FROM YOUR 12 VOLT CAR BATTERY

Rubylite CLAMP-ON

DELIVERS 250 WATTS of smooth, even 3400°K light—

$49.50

Rubylite

PORTABLE MOVIE LIGHT

Fits any camera. No tools needed, no holes to drill. Long life nickel cadmium battery with built-in charger weighs only 7 lbs. Guaranteed one year

$199.50

COMPLETE WITH BATTERY

Write for Full Info motion

PHOTOMART

228 So Fremont Tempe 2 Ariz

Telephone 228 1165

VARIABLE SHUTTERS AND YOIO AUTOMATIC DISSOLVE ATTACHMENTS FOR ALL BOLEX H CAMERAS ALSO DUAL POWER MAGNIFIERS FOR THE BOLEX REFLEX

PELLEGRINI-PIEK

7 COLEMAN PLACE

MENLO PARK, CAL

LA BREA STUDIOS

ROBERT HAGER "Perry Mason" *

M-G-M STUDIOS

CHARLES LANG, ASC, "The Wheeler Dealers" (Filmways Prod., P'Vision & Metrocolor) with Lee Remick and James Garner Arthur Hiller, director.

HARKNESS SMITH, ASC, "Dr Kildare"*.

DALE DEVERMAN, ASC, "The Eleventh Hour"*

ROBERT HAUSER, ASC, "Combat"*

FRED NILES STUDIOS, N Y

SOL NEGAIN, "Universal Electronics (Fred Niles Prods at AT&T) Phil Goodman, director.

PARAMOUNT STUDIOS

MILTON KRASNER, ASC, "Love with the Proper Stranger" (Pakula-Mulligan Prod., shooting in N.Y.) with Natalie Wood and Steve McQueen. Robert Mulligan, director

JOSEPH RUTTENBERG, ASC, "Who's Been Sleeping in my Bed?" (Jack Rose Prod., color) with Dean Martin and Elizabeth Montgomery Daniel Mann, director.

WALLACE KELLEY ASC, "Who's Minding the Store?" (York Jerry Lewis Prod., T'color) with Jerry Lewis and Jill St John Frank Tashlin, director

PARAMOUNT SUNSET STUDIOS

FRANK PHILLIPS, ASC, "Gunsmoke"*

PATHE STUDIOS N Y

GAYNE RESCHER, ASC, "The Nurses"*

PRODUCTION CENTER, N Y

ARTHUR ORNITZ "Act 1" (Dore Schary Prod., Warner Bros.) with George Hamilton and Jason Robards, Jr. Dore Schary, director

REPUBLIC STUDIOS

GEORGE DISKANT, ASC, "The Lloyd Bridges Show"*.

JACK SWAIN, "Rawhide"*

SENECA STUDIOS

JULIAN TOWNSEND "Diary of a Bachelor" (Homer Prods.) with James Hurst and Dagney Crane Sandy Howard, director

TWENTIETH CENTURY-FOX, N. Y.

BORIS KAUFMAN, ASC, "Purley Victorious" (Hammer Films) with Ossie Davis and Ruby Dee Nicholas Webster, director

UNIVERSAL CITY

ARTHUR IBBETSON, "The Chalk Garden" (Ross Hunter Quota Rentals Ltd Prod., T'color, shooting in England) with Deborah Kerr and Hayley Mills Ronald Neame, director

JOSEPH LASHELLE, ASC, "Monsieur Cognac" with Tony Curtis and Christine Kaufman Michael Anderson, director

LIONEL LINDON, ASC, "Alcoa Theatre"*

JOHN WARREN, ASC, "Mad World"*.

WALTER STRENGE, ASC, JOHN RUSSELL, ASC, "Kraft Theatre"*

ELLIS THACKERY, ASC, BENJAMIN KLINE, ASC, WILLIAM MARGUILES, ASC, "McHale's Navy"*

GABOR POGANY, "Dark Purpose" (Brazzi Barcley-Hayutin Prod., Eastman color, shooting in Rome) with Shirley Jones and Rossano Brazzi Steve Barcley, director

WILLIAM MARGUILES ASC, "Alfred Hitchcock Presents"*.

ELLIS THACKERY, ASC, "Wagon Train"*.

JACK MACKENZIE, ASC, "Leave It to Beaver"*

RUSSELL METTY, ASC, "Captain Newman, M D" with Gregory Peck and Tony Curtis David Miller, director

WARNER BROS.

HAROLD LIPSTEIN, ASC, "Palm Springs Weekend" (Technicolor) with Troy Donahue and Connie Stevens Norman Taurog, director

HAROLD STINE, ASC, ROBERT HOFFMAN "The Dakota's"*.

HARRY STRADLING, ASC, "Mary, Mary" (Mervyn LeRoy Prod. Technicolor) with Debbie Reynolds and Barry Nelson Mervyn LeRoy, director

CHARLES LAWTON, ASC, "Youngblood Hawke" with James Franciscus and Suzanne Pleshette Delmer Daves, producer director

HAROLD STINE ASC, BURT GLENNON "True"*

Aging Shrinkage of Film

It is important that motion picture negatives, internegatives and color originals have low aging shrinkage, so that satisfactory prints or duplicates can be made therefrom even after many years of storage. The shrinkage of motion picture positive film on the other hand, is not especially critical. For this reason, a lower shrinkage triacetate negative support was introduced in June 1954 by Eastman Kodak Company for both B&W and color

BUY, SELL, SWAP HERE!

Largest, Most Productive Classified Ad Section Of Any Publication Serving Makers Of Motion Pictures

STUDIO & PRODUCTION EQUIP.

FANTASTIC CLOSEOUTS
FEE LENS SALE
Brand New THC Lenses
First Come First Served

Unmounted, In Barrels, Coated

Series II Speed Panchro	Sale
32mm T2 3	$ 55 00
40mm T2 3	$ 52 00
35mm T2 3	$ 48 00
In Eyema Mounts	
32mm T2 3	$ 79 00
35mm T2 3	$ 68 00
40mm T2 3	$ 72 00
100mm T2 8 Pancratal	$ 96 00
NEW—Surplus Lenses—Coated	
In Eyema Mounts	
4" T2 5—Baltar	$ 92 00
6" T4 6—Wallensak	$ 36 00
10" T5 1—Wallensak	$ 48 00
10" T4 9—Miltar	$ 68 00
100mm T2 9—Ilex	$ 14 00
Zoom Lenses—Used	
17—70mm F2 4 Berthiot Arri mount	$149 50
17—70mm F2 4 Berthiot, C mount w/viewfinder	$174 50
20—60mm F2 8 Berthiot, C mount w/viewfinder	$ 69 50
20—60mm F2 8 Berthiot, C mount w/o viewfinder	$ 49 50
25—100mm F3.4 Berthiot, (new) C mount w/o viewfinder	$179 00
New Tewe (Berlin) Telephoto Lenses	
125mm F2 5 C mount or Leica mount	$ 89 00
150mm F3 C mount or Leica mount	$ 89 00
300mm F3 5 C mount or Leica mount	$149 00
300mm F5 Exacta mount	$129 00

Tewe 35mm Directors Viewfinders
New—with leather case and neckchain
Not **$79 50**—Just **$49 50**

Quantities Limited
Check with order, please

FLORMAN & BASS, INC
68 West 45th Street
New York City, N Y

---

1 ARRIFLEX 35mm camera model 11 A 3 lens turret, front attachment, Cinemascope turret, and sunshade full aperture 1 variable motor, 1 constant speed motor, 1 Arriflex tripod, 4 400' color magazines, 2 200' magazines, 1 32mm Schneider lens 1 50mm Schneider lens, 1 85mm Schneider lens, 1 zoom lens 85mm to 240mm F/4 1 Pan Cinor zoom lens, 38 152mm 1 150mm Kilfold lens 1 16 volt battery 1 charger, 1 changing bag 2 carrying cases for magazines, 2 carrying cases for cameras $5 000 00 JOHN F PAINTER, ASC c/o Movielanews, Inc 460 E 54th St, New York 19 N Y

MOVIOLA model LP (green model) has one optical head on picture side, plus one optical and one 16mm magnetic head Also has provision for additional head Complete with foot controls amplifier, footage counter, etc Everything in excellent working order Best offer RODEL PRODUCTIONS, INC, 1028 33rd St NW Washington 7 D C

STUDIO & PRODUCTION EQUIP.

Sound Equipment Sale

Maurer 16mm recorder model 10 6 track optical, complete w/400 mag, amplifier motor, power supply etc Excellent cond $7850 00
2 35mm custom-built RCA type Dubbers, good condition Both for $ 175 00
RCA 35mm Fantasound Dubbers, 3 for $675 00 each $ 250 00
Magnasync Mark IX 16mm recorder complete very fine condition $1495 00
New, unused RCA 10" auxiliary projector speakers model MI 1312 8, 8 ohm imp, complete with cable Easily adapted to any sound projector $ 25 00
Magnecord rack mounted, Model PT 6R recorder $ 250 00

Sound Effects Records — 12"
EMI — Never Used
Closing Out Lot of 150 Records

10 different (our choice) $15 00
20 different (our choice) $22 50
50 different (our choice) $49 00

Take A Chance
Nomad Magnasync recorder and amplifier Complete Like new $ 225 00

FLORMAN & BASS, INC
68 West 45th Street
New York City N Y

BELL & HOWELL 35mm standard camera, 5 lenses two 400 magazines, misc accessories, excellent condition $1200 00 Eyema Q71 Bell & Howell 3 lenses two 400' magazines accessories $600 00 Cine Special 200' magazine $180 00 Maier Hancock 35 16 hot splicer $200 00 Moviola 35mm SYE 5 way synchronizer, $175 00 16mm editing Moviola magnetic optical $900 00 35mm editing Moviola magnetic optical, $900 00 Cine Special blimp PRO Jr CEC with sync motor $350 00 LARSEN COMPANY, 451 S Highland Ave Los Angeles 36, Calif WE 9 7056

MITCHELL 35mm NC type camera converted to reflex with 28mm Angenieux lens, 35mm to 140mm Angenieux zoom lens, 90mm Makro Kilar two 1000 ft magazines matte box 110 variable speed motor, cases Like new condition, $9000 00 Eyema Q with 3 Baltar lenses two 400 ft magazines 12 volt motor, zoom finder, $695 00 35mm DeVry sound projector, amplifier, speaker, $695 00 Box 1477, AMERICAN CINEMATOGRAPHER

---

5 KW M R SOLARSPOT heads $55 00 2 KW M-R heads, $40 00 750 BM Keglights with stands, $47 50 750 single broads with stands, $40 00; Colortran Sr kit, $100.00, 110 volt door mounted sync motor for Mitchell standard, $325 00 Kinevox automatic slater, $450 00 Mitchell 35mm 400' magazines $60 00 Bodde 4 x 5 background slide projector, $600 00 Bedde 9 x 12 background screen, $100 00 J BURGI CONTNER, ASC, Blue Seal Sound Devices, P O Box 472, New Canaan, Conn

---

LIGHTING equipment for sale 1 Creco 5KW, 1 Kleigl #44n16 5 KW, 13 Kleigl #44n8 2 KW, 3 misc 2 KW, 1 Kliegal 2 KW cone and 2 misc 750 spots Most lights have stands and doors Lights will be sold for best offer RODEL PRODUCTIONS INC, 1028 33rd St NW Washington, D C

STUDIO & PRODUCTION EQUIP.

ODDS AND ENDS ACCESSORIES SALE

Mitchell NC canvas barneys $30 00
ColorTran Sr Converters (used) $69 50
Neumade 35mm single hub measuring machine 4 digit Veeder counter porcelain base, like new $16 95
GSAP 16mm mag gun cameras w/38mm F3 5 Fixed Focus lenses, 3 for $10 00
Par 56, 400 watt, 115 volt sealed beam, G E lamps, ea $ 1 00
Bell & Howell A6A 35mm camera, 2/200' mag 28v motor $69 00
Camart rotating effects prism 6 sided w/ bracket $77 50
NCE Filma trigger grip $12 50
An original Ernie Fittara, custom-built Cine Special animation camera Defies description Hand made heavy as lead but it works Bewildering array of clutches, chains, gears and counters (and a beautiful helically mounted 35mm F2 3 lens) graduated adjustable shutter) A bargain at $1375 00

FLORMAN & BASS, INC
68 West 45th Street
New York City N Y

LEICA M3 with 35mm, 50mm, 90mm, 135mm lenses, wide angle finder, sunshades filters Leica exposure meter and other accessories Over $800 value for only $425 In mint condition, equal in new Write for details Box 1463 AMERICAN CINEMATOGRAPHER

125MM (5 inch) f/2 Schneider Xenon lens, coated T-stopped, in Arriflex mount, equal to new for only $275 00 25MM (1 inch) f/2 3 Bausch & Lomb Baltar lens, coated, in Mitchell mount, equal to new for only $165 00 Torque motor for Arri 16 magazines only $125 00 Box 1456 AMERICAN CINEMATOGRAPHER

AVAILABLE again — brand new guaranteed Cine Kodak Special 100 foot film chambers in original sealed packing, $175 00 each Phone or write for special quantity prices BOB FRIEDMAN ASSOCIATES, INC P O Box 44 Clarkedale, Miss Telephone 627 7370 Area Code 601

REEVES 16mm PV100 recorder and amplifier, cables, recent check and alignment good condition, $795 00 Animation camera 16mm Cine Special 1 Ceco stop-motion motor, special Yalo dissolve $795 00 Filmline processor RT R 16mm high speed reversal, like new $3500 00 CHET LORD, 345 W 53 St New York 19

---

3 BOWLDS animation camera stands 4 B&H 35mm 2709 cameras with/without stop motion motors, 2 16mm Cine Specials Call or write JOE LYNCH, 733 N LaBrea Ave Hollywood, Calif WE 8 1078

BOLEX Rex lenses 75mm, 25mm 10mm Pellegrini variable shutter, 400 ft magazine, Stevens motor Best offer DR McINTYRE 4620 Nichols Parkway, Kansas City, Mo

---

CINE Special 1 with 100 and 200 ft magazines, Ektar 25mm lens F/1 4, 50mm F/1 6, 112 and 150mm lenses tripod and dolly, matte etc Excellent $795 00 MICHAEL GROSSI, 630 Maplewood Ave, Roselle Park New Jersey

Continued on Next Page

RATES: Ads set in lightface type, 20¢ per word Minimum ad, $2 00. Text set in lightface capital letters (except 1st word and advertiser's name) 40¢ per word Modified display format (text set in boldface type capitals or upper and-lower case) $2 00 per line. Send copy with remittance in cover payment to Editorial Office American Cinematographer, P O Box 2230, Hollywood 28, Calif Forms close 1st of month preceding date of issue

Classified Ads

Continued from Preceding Page

STUDIO & PRODUCTION EQUIP.

MAGNASYNC 16mm X 400 tape recorder good condition, $650 00 BERT PENZIEN 15240 Crescentwood, East Detroit Michigan

BELL & HOWELL 70HL camera rebuilt One year warranty $345 00 NORTEX ELECTRONIC CO P O Box 2071 Fort Worth Texas

FOR SALE, DePue 16mm b &-w and color printer and sound light change board Perfect condition 16mm animation camera with automatic elevator C. O BAPTISTA FILM MISSION Sunnyside Ave Wheaton Illinois

200 STEINMAN 16/35mm processing reel and loader, 16mm sound silent printer, Morse G 3 tank $89 00 Holmes 16mm projector 4000' cap 2022 Condor, Colorado Springs, Colo

IN STOCK—5' square Glass Filters for Mitchell R/35 Reflex camera Write for list and prices Florman & Babb, 68 W 45th St New York City N Y

BARGAINS processors lenses (16 & 35), cameras etc Write for list PROFESSIONAL CINE PRODUCTS, 2222 N Prairie, Dallas, Texas

EQUIPMENT WANTED

INSTANT CASH
HIGHEST PRICES PAID
for your used 16mm and 35mm professional equipment of any kind
URGENTLY NEED
ARRIS, AURICONS, MITCHELLS,
Zoom lenses lab, editing lighting & recording equipment for our Rental Program
CONSIGNMENTS WELCOME
NEW—USED
RENT, BUY TRADE, REPAIR
HOLLYWOOD CAMERA COMPANY
6838 SUNSET BLVD, HOLLYWOOD 28 CALIF

TOP CASH Dollar Paid For Good used 35mm Arriflex camera, 400 ft magazines, 35mm zoom lens for Arriflex 35mm viewer (Ceco, Edtola, etc) with picture area at least 4x6 Moviola, 35mm Arriflex constant speed and synch motors, Houston or Raby Dolly, Nagra Sound Unit, reflectors with stands, generator truck, Kleig or Mole Richardson lights and any other equipment for use by rapidly expanding production company R MENARD, 714 Howard Avenue, New Orleans, Louisiana Telephone 525 7056

WHY SACRIFICE
your production and struggle with old or used equipment when we can trade for cash or new equipment? Let us know what you have and what you need
THE CAMERA MART INC
1845 Broadway PL 7 6977 New York 23 N Y

Need used Auricon Cinevoice or Pro 200 If interested write Box 1479, AMERICAN CINEMATOGRAPHER

Urgently need good used Moviola Crab Dolly also Crane Write Box 1481, AMERICAN CINEMATOGRAPHER.

Would like to buy used Mole Richardson lights 750 w Spots and Brutes Must be in good shape Box 1480 AMERICAN CINEMATOGRAPHER

EQUIPMENT WANTED

TRY F&B LAST
FOR THE HIGHEST QUOTE ON
USED MOVIE EQUIPMENT
FLORMAN & BABB
68 W 45th ST N Y 36 N Y

Looking for good Fisher Mike Boom Send information to Box 1478 AMERICAN CINEMATOGRAPHER.

Want to sell your Mitchell BNC? Will pay top cash price for camera in good condition Box 1482 AMERICAN CINEMATOGRAPHER

WANTED to buy all types of projection bulbs spotlight bulbs ADVANCED SPOTLIGHT SERVICE Box 206 Passaic, N J

WANTED for cash—used Auricon cameras Cinevoice and Pro 200 s Write description and price Box 1472, AMERICAN CINEMATOGRAPHER

WILL pay cash for used Crab dollies Fisher mike boom crane camera car Send pic, description and price Box 1474, AMERICAN CINEMATOGRAPHER

NEEDED immediately—Mole Richardson spot lights good used, late models only Also arcs accessories and grip equipment Box 1473 AMERICAN CINEMATOGRAPHER

WANTED used BNC Mitchell and 35mm Arri with blimp Box 1475 AMERICAN CINEMATOGRAPHER

SERVICES AVAILABLE

HONG KONG ASSIGNMENTS English speaking, T C Wong assistant to producer of The World of Suzie Wong has staff and equipment available for all phases 16/35mm production Contact one who knows Hong Kong and save dollars No 1 Yun Ping Road Hong Kong Cable Salonfilms.

INDEPENDENT film producer/cameraman now doing industrial filming—an experienced editor—wants challenging position in a progressive company commercial or in plant Box 1483 AMERICAN CINEMATOGRAPHER

To Get Results
THERE IS NO SUBSTITUTE
FOR ADVERTISING
If you are an experienced motion picture cameraman, film editor, sound recorder, etc., and you
ARE AVAILABLE
. . . let potential employers know about it through a Classified Ad in
AMERICAN
CINEMATOGRAPHER
Our classified ad rates
ARE LOWER
than for any other publication serving the makers of motion pictures.

SERVICES AVAILABLE

We can DISTRIBUTE your 16mm black and white or color film adventure documentary or short subjects What ever you have Box 1476 AMERICAN CINEMATOGRAPHER

TITLES by CINETITLES 16mm and 35mm service Lower your production costs ASSOCIATED CINETITLE SERVICES, 13204 Shaver Street Baldwin Park California

CAMERAMAN available for assignments including UNDERWATER ROY CHEVERTON, 2625 N Ocean Blvd Fort Lauderdale, Fla

AFRICA
Full 16mm equipment, Arri, Magnasync, etc. Experienced cameraman Complete safaris arranged for tourists or professional units TRANS-AFRICA GUIDES, Box 9538, Nairobi, Kenya

EUROPEAN assignments: THOMAS d HOSTE, 31 Avenue Mac-Mahon, Paris 17, France In U S A, 7617½ Hollywood Boulevard, Hollywood, California

FILM assignments, 16mm, Detroit area, scenic, stock shots Editing and titling HOWARD TRIEST, 10400 Saratoga, Oak Park 37 Mich LI 2-7874

BRAZILIAN English speaking production unit available for assignments in Brazil Uruguay etc 11 years' experience, color B&W HELICONFILM, Ave Ipiranga 1248 Sao Paulo

JAPANESE English speaking director cinematographer for features TV, etc. HARRY MIMURA, 2-1303 Setagaya, Tokyo, Japan. Credits Around the World in 80 Days (Far East locations) American TV films (See American Cinematographer, March, 1961)

16mm FILM assignments—Chicago scenic, industrial in plant ARLETTE STUDIO FILM PRODUCTIONS, 1657 Grace St, Chicago 13, Illinois BI 8-8612 Ask for brochure

SOUTHWESTERN U S assignments 16mm. Accent on desert photography travelogue and mining WEST WIND PRODUCTIONS, P O Box 325, Aja Arizona

WANTED

OUTSIDE salesman Must be experienced Salary and liberal commission Our employees know of this ad Only top-notch man with good background in motion picture equipment sales will be considered Los Angeles area Box 1464 AMERICAN CINIEMATOGRAPHER

WANTED FOOTAGE Modern 16mm color original or equal on people places and general atmosphere, exterior or interiors, in Australia Mexico, Finland, Brazil, France, England and Canada Write Box 1471, AMERICAN CINEMATOGRAPHER

FILM WANTED amateur and professional films for TV release Drama variety comedies adventure cartoons and documentaries accepted WELLINGTON FILMS P O Box 884, Hollywood 28 Calif

LABORATORY & SOUND

SOUND RECORDING at a reasonable cost High Fidelity 16 or 35 Quality guaranteed Complete studio and laboratory services Color printing and lacquer coating ESCAR MOTION PICTURE SERVICE, INC, 7315 Carnegie Avenue, Cleveland 3, Ohio Phone ENdicott 1-2707

QUESTIONS & ANSWERS

Continued from Page 268

And, the sound that is recorded on stripe by a professional recorder has its own quality limitation in playback, based on such projection factors as close and constant contact with the magnetic playback head, consistent thickness and smoothness of the magnetic coating, effective steadiness of movement over the sound head—plus the distribution limitation of fewer magnetic than optical projectors in the field, and the hazard of either intentional or unintentional alteration of the track. For these reasons, the use of magnetic sound tracks on release prints has been rather limited.

However, the fact remains that the quality can be quite good, and there are other unquestioned, special-use advantages.

For one thing, the producer can use a stripe on his edited work print to record a temporary version of what will be the finished sound track, in order to present both picture and sound to his sponsor or film buyer for approval. Of course, this type of presentation has been used ever since sound came in, but prior to magnetic striping this required the use of costly facilities to play back the separate sound track or tracks. This meant the producer had to get the customer into his own production studio, or into a recording studio equipped to handle both sound and picture on separate machines. With magnetic stripe and a magnetic projector, the presentation becomes portable — the striped and edited work print can be taken anywhere for the approval showing.

This type of sound presentation usually results in a continuous projection session and eliminates the tendency to interruption, as when a script is read against the edited picture. However, after the first run, changes can be made, easily and economically as compared to the considerable cost involved in making changes in a final recorded optical track. The flexibility of a magnetic sound track is of perhaps the greatest value to the user of a film.

For prints to be used abroad—by industry, governmental agencies, church missions, or others—it has proved useful to have a full-width (100 mil) magnetic stripe on which the exhibitor, using his own magnetic-optical projector, may then record the language, dialect, or subject matter desired for showing to a particular audience, and to change the track again for the next audience, if necessary. Assuming the availability of a magnetic projector-recorder, a different language or a different interpretation of subject matter can be recorded on the print, on the spot. Or, with a magnetic stripe (50 mil) covering half the "normal" optical track area, a print may be run using either the optical sound head to reproduce the sound on the optical track (say, English), or on the magnetic head, to reproduce whatever sound the print owner wanted to record on the half-stripe (say, Spanish). This involves some loss of quality on the photo track, but it is still intelligible.

The magnetic stripe on film has its definite values, as another specialized aid in certain types of limited production, in speeding and smoothing production approvals, in reducing sound track costs on simple or small print orders, and in providing a valuable flexibility for changing the material on the track in the field. ■

WHAT'S NEW

Continued from Page 272

same photo light performance characteristics in a low line-voltage situation as is possible with standard 120-volt line output.

TRIPOD TRIANGLE

The newly designed Camart tripod triangle, available through The Camera Mart, Inc., 1845 Broadway, New York 23, features center construction with a recessed casting to eliminate unsteady hinges. One stationary triangle bar arm and two movable bar arms allow the triangle to be collapsed into flat position when not in use. All-aluminum construction of centerpiece channel and bar arms provide durability. All nuts, screws and bolts are nickel-cadmium plated for rust protection. Shoes for tripod leg tips are deep cast at an angle with a stop rest for safety.

Tie-down clamps are of floating design insuring accurate centering of tri-

"HOT" Print Your Titles with

TEL-Animaprint®
HOT PRESS
Prints Dry & Fast
only $495
Write for brochure

S.O.S. PHOTO-CINE OPTICS, Inc.
602 West 52nd St., New York 19 — PLaza 7-0440
Western Branch 6331 Holly'd Blvd., Hollywood, Calif

AVAILABLE SOON
COLOR REVERSAL
WORK PRINTS
35mm 07 ft. 16mm 05 ft.

B&W WORK PRINTS
KEY NUMBERS
35mm 05 ft. 16mm 04 ft.

LEADER
35mm: Black frame 036 ft. Academy, TV or MP 04 ft.
16mm: Black Opaque 02 ft. Academy, TV or MP 03B ft

NO SPLICED STOCK
RAPID SERVICE

SURPLUS MOTION PICT. EQUIP.

ASSOCIATED TEL-A-PHOTOLABS, INC
2705 West Olive, Burbank, Calif
TH 6-7779
EM 6-1036

24 HR. SERVICE
WEEK ENDS
35 SEPIA TONE MM

NEW IMPROVED PROCESS
LAMINATED SOUND STRIPING
THE Vitatone CO. 8MM—16MM 2½¢ per ft.
380 Ft Minimum Order — Quality Guaranteed
Send for Free Brochure
7361½ SO. ATLANTIC BLVD., LOS ANGELES 22, CAL.

U. C. M.

for

MOTION PICTURE PRINTERS

at

UHLER CINE MACHINE CO.

15762 Wyoming Avenue, Detroit 38, Mich
Phone: UNiversity 1-4663 • Cable UHLCIMA

L & F PORTABLE CINE PROCESSOR

• Fully Automatic • Daylight Operating

$675.00 (f o b Chicago)

- 16mm or 8/8mm
- Requires no plumbing
- Process 200 Ft B&W Film In Less Than 1 Hour
- Reversal Processing
- Less Than 1 Gallon of Solution Needed
- 32"x9"x24"| 55 lbs|

Write For Descriptive Literature

SUPERIOR BULK FILM CO.

446-48 N. Wells • Chicago 10, Illinois

ASIA 'S COVERED BY

FARKAS FILM COMPANY

424 LI PO CHUN BUILDING
HONG KONG

COMPLETE 16/MM & 35/MM
PRODUCTION FACILITIES

BOLEX ACCESSORIES
By STEVENS

New Synchronous Camera Drive
New Panel-type Camera Drive
New 400-foot Magazine
New Intervol Timer

Write for our Bolex Accessory Catalog

STEVENS ENGINEERING CO.

Dept "A", 340 Newport Blvd
Newport Beach, Calif

FOR MORE INFORMATION about the products and services advertised in these columns, use the convenient postage-paid inquiry card facing the last page

pod legs The down bolts are fully threaded to provide a sure lock, do not depend on friction action to secure tripod legs. The complete shoe assembly can be unscrewed from the triangle arms for use as a camera car-top tripod leg clamp set List price is $34 95

•

ARRI EFFECTS MATTES

The Arriflex Corporation of America announces as their newest addition to the Arriflex-16 cine system a set of special effect mattes designed to slide into the front frame of the Arriflex matte box

Apertures are available in various sizes, representing window frame binocular and keyholes The five mattes, anodized a non-reflective flat black, are made of heavy duty aluminum alloy that will withstand a lot of abuse These low priced mattes are available singly

A Data Sheet describing these mattes is available upon request from Arriflex Corporation of America, 257 Park Avenue South, New York 10, New York •

INDUSTRY NEWS

Continued from Page 258

Chuck Austin Returns To N.Y.

Chuck Austin, ASC, currently on an extensive marketing survey throughout the U.S for the Mitchell Camera Corp. advises his twelve-month special assignment will be completed in June. He will return from Hollywood to New York in July to resume his activities as a director of photography

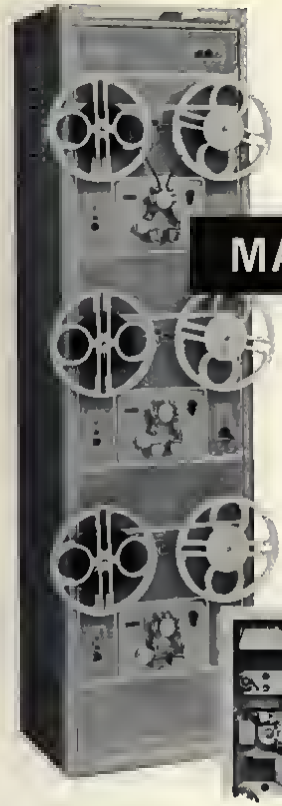
Corrections

In the picture caption accompanying the article "The Pros Shows The Students How" in our February issue (p 93) we erred in naming Terry Sanders as the camera operator Mike Neyman was cameraman and is shown behind the Mitchell camera in the picture

Also, in same issue, we erroneously stated that Camera Service Center of New York had been named distributor of the new Eclair 16mm reflex camera result of misinterpreting a news release. CSC informs us this is incorrect; that they have purchased this outstanding new camera and will have it available for rental and sale through its sales affiliate, Camera Sales Center Corp, 333 W 52nd St —EDITOR ■

INDEX TO ADVERTISERS

	Page
American Cinematographer Manual	262
Arriflex Corp. of Amer.	253, 269
Assoc Tel-A-Photolabs	309
Bauch-Auricon, Inc	4th Cover
Birns & Sawyer Cine Equip.	263
Byron	265-266
Camera Equipment Co, Inc	257
Camera Mart, Inc	256, 258, 304
Camera Service Center	259
Capitol Film Laboratories	295-296
Chevereau	302
Cinekad Engineering Co.	305
Cleanolt	299
ColorTron Industries	297
Victor Duncan & Co	305
Eastman Kodak Co.	282-283
Elgeet	268
Farkas Film Co	310
Film Effects of Hollywood	297
Filmline Corporation	301
Flarman & Babb, Inc	270, 298, 299, 300, 301, 303
Jack Frost	281
W. J. German, Inc	2nd Cover
Hollywood Camera Co.	264
Hollywood Film Co.	271
Lab-TV	294
Lowel-Light Photo Engr	302
Kling Photo Corp	254
Magnasync Corp	3rd Cover
Ray Mercer & Co	303
Micro-Record Corp	299
Midwestern Film Lab.	272
Miller Professional Equipment	304
Mitchell Camera Corp.	292, 293
Mole-Richardson Company	298
Mole-Richardson European Service	267
Movielab	255
Pailard, Inc	145
Pathe Products, Inc	272
Pellegrini-Pink	306
Photomart	306
Photo Research Corp	300
Precision Laboratories	272
Ernest M. Reynolds	297
Charles Ross, Inc	289
S O S Photo-Cine-Optics, Inc	273, 298, 302, 306, 309
Stevens Engineering Co	310
Superior Bulk Film Co	310
Sylvania Elec Prods.	260-261
Uhler Cine Machine Co	310
Video Film Laboratories	300
Vitatone Co.	309



"building blocks" for sound engineers

MAGNASYNC DUBBERS

Producers have found that the use of a single recording channel is only a small part of the tremendous savings possible with magnetic film recording. The next step for the organization seeking quality, economy and independence is to equip to handle their own transfer work, assembly and magnetic mixing of dialogue, music and sound effects.

Magnasync dubbers are of "modular" design and are available individually or in combination of two or three units mounted in an enclosed rack cabinet that requires only 22" of floor space.

Single Dubbers, from **$1190**

Triple Interlocked Dubbers, from **$3910**

Rear interior view of Selsyn motor electrical interlock

FEATURES:

- Plug in preamplifiers with balanced 600 ohm output at zero vu.
- Individual synchronous drive motors.
- Torque motor take-up guarantees smooth film handling and hi-speed rewind.
- Electrical interlock assures absolute "sync" with projector from dead start.
- Wired for remote control, start and stop.
- Fast rewind, fast forward.
- Position for second playback head for transfer of both edge and center track recordings.
- Available with 16mm, 17½mm or 35mm transports.

GENERAL SPECIFICATIONS:

Frequency response: 50 cps to 8,000 cps, ±2 db (16mm, 36 fpm), 50 cps to 12,000 cps, ±2 db (17½mm or 35mm, 90 fpm).

Signal-to-noise ratio: > 50 db.

Flutter and wow: 0.12% maximum RMS in any single band.

Distortion: < 0.18% maximum RMS overall total harmonic.

Send for free 41-page catalog describing recorders, dubbers, consoles and accessories.

MAGNASYNC Magnaphonic SOUND SYSTEM

Write, wire or phone

MAGNASYNC CORPORATION

5546 Satsuma Avenue, North Hollywood, California • TRiangle 7-0965 • Cable "MAGNASYNC"

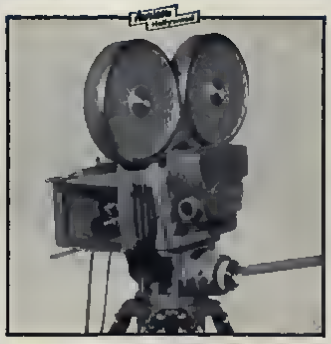
International leaders in the design and manufacture of quality magnetic recording systems

AUTHORIZED DEALERS:

CHICAGO, ILL.
Behrend Cine Corp
161 E. Grand MI 2-2281
Zenith Cinema Service, Inc.
3252 Foster, IB 8-2104
DALLAS, TEXAS
Producers Services, Inc.
4519 Maple Ave.
Southwest Film Labs
3024 Fort Worth St
DAYTON, OHIO
Salem Camera Co.
335 Salem, BA 3-7206
DENVER, COL.
Western Cine Service, Inc.
312 S. Pearl, SH 4-1017
HIALEAH, FLA.
Camera Equipment Co., Inc.
51 E. 10th, TU 8-4064
HOLLYWOOD, CALIF.
Binns & Sawyer Cine Equipment
6424 Santa Monica, HO 4-5166
Camera Equipment Co., Inc.
6510 Santa Monica, HO 9-9119
S.O.S. Photo-Cine-Optics, Inc.
6331 Hollywood, HO 7-9202
HOUSTON, TEXAS
Cine Associates
P.O. Box 98, Bellaire
KANSAS CITY, MO.
Barnard's, 4724 Broadway,
Country Club Plaza, LO 1-7781
Crick's Camera Shop
6320 Brookside Plaza, HI 4-3390
MINNEAPOLIS, MINN.
Century Camera Shops, Inc.
26 S. 7th, FE 8-5857
NEW YORK CITY
Camera Equipment Co., Inc.
315 W. 43rd, JU 6-1420
Florman & Babb, Inc.
68 W. 45th, MU 2-2928
Photonics Corporation
236 E. 46th, YU 6-3713
S.O.S. Photo-Cine-Optics, Inc.
602 W. 52nd, PL 7-0440
PHOENIX, ARIZ.
Wilson Camera Sales Co.
130 W. Adams, AL 4-0662
ST. LOUIS, MO.
Stanley Photo Service
106 N. Broadway, CE 1-7840
SAN FRANCISCO, CALIF.
Brooks Cameras, Inc.
45 Kearny, EX 2-1902
SAN MATEO, CALIF.
Foremann's
121 Fourth Ave., DI 3-1660
CANADA, Islington, Ontario
Alex L. Clark Ltd.
3751 Bloor St., W.
SOUTH AFRICA
Photo Agencies Pty. Ltd.
8 Kerk St., Johannesburg
SOUTH RHODESIA, Salisbury
William Over & Co. Pvt. Ltd.
Kingsway & Manica Road
BOLIVIA, La Paz
Cees Kevlin
Casilla 506, Calle Potosi 281 263
BRAZIL, Rio de Janeiro
Mesbla S.A.
Rua do Passeio 42/58
ASIA:
AUSTRALIA, Sydney
Sixteen Millimetre
Australia Pty. Ltd.
49 Market, New South Wales
BURMA, Rangoon
G.K. Theatre Supply Co. Ltd.
123 Sule Pagoda Road
HONG KONG
Supreme Trading Co.
60 Hennessy Road
INDIA, Bombay
King Engineers
26 New Queen's Road
JAPAN, Tokyo
J. Osawa & Co., Ltd.
5, Ginza Nishi 2-Chrome, Chuo-ku
NEW ZEALAND, Auckland
Kerridge Odeon Industries
St. James Building, Queen St.
PAKISTAN, Karachi-3
Film Factors Ltd.
27 Victoria Rd., Rex Annexe
THAILAND, Sriwong, Bangkok
G. Simon Radin Co., Ltd.
30 Patpong Avenue
EUROPE, Magnasynn Offine-
SWITZERLAND, Geneva
William P. Lear, Jr.
P.O. Box 18, Airport Geneva 15
DENMARK, Copenhagen CHL
Kinovox Electric Corp.
Jenstenusvej 2
ENGLAND, London
Delene Lee Processes, Ltd.
12 Moor St., (W.D.)
Gordon Cameras, Ltd.
45 Kensington High, (W.8)
FRANCE, Paris
Brockliss-Simplex S.A.
6 Rue Guillaume Tell
GERMANY, Hilden Dusseldorf
Gerhard Johannsen
3 Lessingstrasse
GREECE, Athens
Christos Axarlis
30 Stadium St.
ITALY, Rome
Reportfilm di J. M. Schnller
Via Antonio Bertolini 31

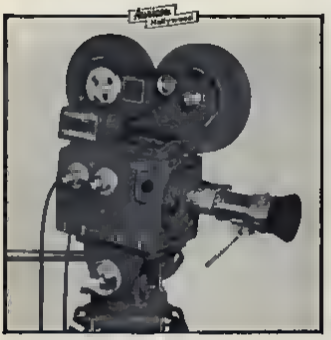
AURICON 16mm Sound-On-Film for Professional Results!

"CINE-VRICE II" 16mm Optical Sound-On-Film Camera. ★ 100 ft. film capacity for 2¾ minutes of recording. 6-Volt DC Convertor or 115-Volt AC operation. ★ $967.00 (and up).



"AURICON PRO-600" 16mm Optical Sound-On-Film Camera. ★ 600 ft. film capacity for 16½ minutes of recording ★ $1871.00 (and up) with 30 day money-back guarantee.

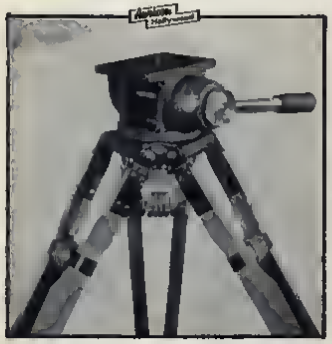
"SUPER 1200" 16 mm Optical Sound-On-Film Camera. ★ 1200 ft. film capacity for 33 minutes of recording. ★ $5667.00 (and up) complete for "High-Fidelity" Talking Pictures.



"PRO-600 SPECIAL" 16mm Light Weight Camera. ★ 400 ft. film capacity for 11 minutes of recording. ★ $1,295.00 (and up).

PORTABLE POWER SUPPLY UNIT—Model PS-21... Silent in operation, furnishes 115-Volt AC power to drive "Single System" or "Double System" Auricon Equipment from 12 Volt Storage Battery, for remote "location" filming ★ $269.50

FILMAGNETIC—Finger points to Magnetic pre-stripe on unexposed film for recording lip-synchronized magnetic sound with your picture. Can be used with all Auricon Cameras. ★ $960.00 (and up).



TRIPOD—Models FT-10 and FT-10S12... Pan-Tilt Head Professional Tripod for velvet-smooth action. Perfectly counter balanced to prevent Camera "dumping." ★ $406.25 (and up).

Strictly for Profit
CHOOSE AURICON

If it's profit you're after in the production of 16 mm Sound On Film Talking Pictures, Auricon Cameras provide ideal working tools for shooting profitable Television Newsreels, film commercials, inserts, and local candid-camera programming. Now you can get Lip-Synchronized Optical or Magnetic Sound WITH your picture using Auricon 16 mm Sound-On-Film Cameras. Precision designed and built to "take it."

Strictly for Profit—Choose Auricon!

BACH AURICON, Inc.

9908 Romaine St. Hollywood 38, Calif.

HOllywood 9-0831

BACH Auricon ®

Write for your free copy of this 74-page Auricon Catalog

★ Auricon Equipment is sold with a 30-day Money Back Guarantee. You must be satisfied

MANUFACTURERS OF PROFESSIONAL 16MM CAMERAS SINCE 1931